Investor Relations, Firm Visibility, and Investor Following

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Abstract

Many firms face significant challenges in improving visibility and attracting investors to their stock, with the goal of improving liquidity and the cost of capital. One response to these challenges is to hire an investor relations (IR) firm. Through interviews and surveys with IR professionals, we learn that the IR process focuses on management access and company visibility as key drivers of the strategy's success; disclosure practices are often not primary focus of IR. Also, the IR strategy often must progress in stages, with increased visibility and trading by the existing investor base preceding increases in following by institutions and analysts. Our empirical tests examine a sample of 184 companies that hired IR firms. We find that these companies have significant increases in their disclosure, press coverage, trading activity, institutional investor ownership, analyst following, and market valuation after hiring the IR firm, both in absolute terms and relative to a control sample matched on exchange, industry, time listed, and prior investor following. Increases in disclosure, press coverage, and trading activity are observed immediately; increases in institutional ownership and analyst following typically do not follow until two quarters later. Moreover, lead-lags tests show that companies experiencing increases in "investment viability attributes" (e.g., disclosure, press coverage, and trading activity) soon after hiring an IR firm have a greater subsequent increase in institutional investor and analyst following. The magnitude of these changes is conditional on exchange listing: NASDAQ companies experiences bigger increases in institutional investor and analyst following, whereas companies on the OTC Bulletin Board and Pink Sheets experience greater increases in trading activity and press coverage. Finally, we find that companies experience a decrease in their book-to-price ratios after hiring an IR firm and that these valuation impacts are greatest for companies that have improved their investment viability attributes during the year. Overall, these results suggest that IR activities play a significant role in helping small and mid-cap companies overcome their low visibility due to their firm characteristics to attract a wider following by investors and information intermediaries and improve their market valuation

1. Introduction

A large body of literature documents important benefits of voluntary disclosure for liquidity and cost of capital. This work often implies that these benefits can be obtained by simply increasing the quantity and quality of disclosure. However, this assumption is challenged by the visibility literature, which suggests that large groups of securities are often overlooked by investors due to their low visibility (e.g., "home bias" in foreign investing), despite clear benefits in the risk-return trade off from investing in these securities more broadly. Prior work also documents that certain firm characteristics, such as size, liquidity, and exchange listing, tend to attract institutional investors and security analysts to firms, solving the visibility problem. Combined, these literatures suggest that some firms, notably smaller firms on minor exchanges, face significant challenges in improving visibility and attracting investors and analysts.

In response to these challenges, many firms voluntarily adopt an investor relations (IR) strategy with the goal of creating useful disclosures, attracting information intermediaries, and targeting a desired investor base (Brennan and Tamarowski [2000], Hong and Huang [2003]). These strategies often involve providing additional voluntary disclosures and maximizing the benefits of this disclosure by taking actions to raise the visibility of the firm. While firms often make significant investments in these strategies, there is little academic research into the IR process as a whole (Brennan and Tamarowski [2000]). The goal of this paper is to establish a richer understanding of the actions taken in IR strategies and to investigate whether they are successful in impacting the trading in, and valuation of, a firm's stock, as well as its following by institutional investors, analysts, and the media.

Motivated by the complex nature of the IR process and the limited discussion of it in the literature, we conduct interviews and a survey of a small group of IR professionals to better

understand the activities involved in successful IR programs. We focus primarily on IR strategies for small and mid-cap companies, which are most likely to face visibility issues and difficulties in attracting investors and information intermediaries.

Our survey and interviews indicate that interactions with buy-side investors are considered crucial for the long-run success of an IR policy. Analyst coverage is considered helpful, but is often viewed as unattainable for small and mid-cap companies due to the economics of analyst research. Media coverage is viewed as important in building visibility for companies, and in many cases is a more achievable goal than analyst coverage. While many IR specialists view quality disclosure as important, most argue that direct contacts with investors and information intermediaries increase management's credibility and thus have a greater impact on the success of the IR strategy. In fact, throughout our interviews, it was very clear that direct meetings with management were crucial for a successful IR program.

The interviews suggest that most mid-cap and small companies require a strategy for developing "investment viability attributes", such as sufficient stock liquidity, improved disclosure, and increased press coverage, before they can attract serious interest from most of the buy side and analysts. Thus, many companies begin the IR process with press releases in an attempt to "wake up dormant investors" in their shareholder base and with a focus on small or specialized buy-side or retail investors that will trigger more trading in their stock.

We provide empirical evidence on the IR process by studying a sample of 184 companies that hired IR consultants to develop an investor relations strategy. We find that these companies have significant increases in their disclosure, press coverage, trading activity (e.g., share volume), institutional investor ownership, analyst following, and market valuation (i.e., book-to-price ratio) after hiring the IR firm, both in absolute terms and relative to a control sample

matched on exchange, industry, time listed, and prior investor following. Consistent with our predictions, the increases in disclosure, press coverage and trading activity are observed immediately after the companies hire IR firms, suggesting that IR activities impact these investment viability attributes relatively quickly. Increases in institutional ownership and analyst following do not begin until the second quarter after hiring the IR firm, indicating that attracting these parties requires a lengthy communication effort. Lead-lags tests show that companies experiencing increases in investment viability attributes soon after hiring an IR firm have a greater subsequent increase in institutional investor and analyst following.

We also find that the magnitude of these changes is conditional on exchange listing. NASDAQ companies experiences bigger increases in institutional investor and analyst following, suggesting these companies have the necessary investment viability to attract institutions and analysts. Companies in the OTHER OTC markets (OTC Bulletin Board and Pink Sheets) experience greater increases in trading activity and disclosures, consistent with efforts to build investment viability before attempting to attract institutions and analysts. NYSE and AMEX companies are largely unaffected by the hiring of an IR firm.

Finally, we document that companies experience decreases in their book-to-price ratios after hiring an IR firm. These valuation impacts are greatest for companies that have improved their investment viability attributes during the year, suggesting that the IR actions can impact valuation. Again, we find these results are most pronounced in NASDAQ companies, with some evidence for the OTHER OTC firms.

Overall, these results suggest that IR activities play a significant role in helping small and mid-cap companies overcome their low visibility due to their firm characteristics, attract a wider following by investors and information intermediaries, and impact their firm valuation.

Our paper contributes to the literature by providing evidence regarding the IR process, for which there has been little investigation in the past despite its alleged importance. Two prior studies use the summary AIMR ratings of firms' investor relations activities to document that more highly-rated IR actions are associated with greater analyst following (Lang and Lundholm [1996]) and greater ownership by transient institutional investors (Bushee and Noe [2000]). However, these studies only examine firms that are already large and highly visible and do not shed much light on the specific activities undertaken in the IR process. We use a survey and interviews to provide a richer understanding of this process and an empirical study to provide evidence on the consequences of IR strategies for firms experiencing low visibility.

Our paper also contributes to the disclosure, visibility, and investor following literatures by examining a mechanism by which firms can overcome fundamental problems they have in attracting investor following and trading. These literatures suggest that disclosure and visibility play an important role in attracting investors, improving liquidity, and reducing the cost of capital. However, prior work suggests that only firms with certain characteristics, such as size, exchange listing, or existing liquidity, are able to obtain these benefits. We find that actively engaging in IR activities provides a possible avenue to overcome these problems and build an investor base, contributing to our understanding of one of the "black box" mechanisms that firms use to gain attention in a crowded market.

The next section reviews prior literature in more detail to motivate our investigation of the IR process. Section 3 presents the findings from our surveys and interviews of IR professionals. Section 4 outlines our empirical predictions and research design and Section 5 describes the sample and data. Empirical results are presented in Section 6 and Section 7 concludes.

2. Motivation and prior literature

Investor relations (IR) integrates activities such as creating useful voluntary disclosure, attracting analyst and media following, and targeting desired investors for the company (Brennan and Tamarowski [2000], Hong and Huang [2003]). Companies incur significant costs in undertaking these activities. For example, an IR program in a typical small or newly-public firm will require 20-25% of the CEO's time and approximately 50% of the CFO's time (Hong and Huang [2003]). While the widespread use of IR and the large costs incurred suggests this is an important activity for many firms, there has been little academic research that has focused on the IR process (Brennan and Tamarowski [2000]). However, there are several streams of literature that provide evidence regarding the importance to firms of some of the key features of IR, namely disclosure, visibility, and attracting investors and analysts.

The disclosure literature provides many insights into areas of IR such as why specific disclosures are provided (Skinner [1994]), how disclosure can impact cost of capital (Botosan [1997]), how changes in disclosure impact following by information intermediaries and stock price attributes like bid-ask spreads, volume, and volatility (Healy, et al. [1999], Bushee and Noe [2000]), how investor bases impact disclosure practices (Bushee, et al. [2003]), and how packaging of a disclosure impacts its credibility (Hutton, et al. [2003]). This literature makes it clear that the quality and quantity of voluntary disclosure has an important impact on how the firm is viewed by outside stakeholders.[1]

This literature assumes that all disclosure is read and utilized by market participants. Contrary to this assumption, there is a large literature regarding the visibility of the firm and its

[1] A full review of the disclosure literature is beyond the scope of this paper. See Healy and Palepu [2001] and Verrecchia [2001] for comprehensive reviews of this literature.

impact on price. This literature draws on Merton [1987], which suggests that an increase in the size of a firm's investor "base" (i.e., the number of investors that are aware of the firm's existence) will reduce its cost of capital. The empirical literature in this area primarily examines which visibility attributes drive investment preferences, including international home bias (e.g., French and Poterba [1991], Cooper and Kaplanis, [1994], Kang and Stulz [1997]), within-country local bias (Coval and Moskowitz [1999], Huberman [2001], Hong, et al. [2004]), stock exchange listing (Kadlec and McConnell [1994]), advertising intensity (Grullon, et al. [2004]), press coverage (Falkenstein [1996]), and presentations to analysts (Francis, et al. [1997]). Huberman (2001) summarizes this evidence by saying "Together, these phenomena provide compelling evidence that people invest in the familiar while often ignoring the principles of portfolio theory." This literature suggests that, for disclosure to be effective, there has to be some degree of visibility of the firm, highlighting the potential importance of IR activities that impact both visibility and disclosure.

A key goal of many IR strategies is identifying and attracting investors with characteristics preferred by management, such as institutional investors (Elgin [1992], Byrne [1999]). There is a large literature examining the firm characteristics that are associated with more investment by institutional investors (e.g., O'Brien and Bhushan [1990], Hessel and Norman [1992], Del Guercio [1996], Falkenstein [1996], Gompers and Metrick [2001], Bushee [2001]). These papers consistently find that institutions prefer larger firms that are listed on stock indices and major exchanges (such as the NYSE) and that provide a high level of liquidity. Prior work also finds that disclosure quality and visibility are important determinants of

institutional investor ownership (Bushee and Noe [2000], Bradshaw et al. [2004])[2] While these studies find that certain firm characteristics are significant determinants of investor following, they do not address the question of whether, or how, firms lacking these attributes can attract institutions. This gap provides a key motivation for examining the role of IR.

Similarly, IR strategies often attempt to use information intermediaries, such as analysts and the press, to increase firm visibility and attract investors. The literature on analyst following indicates they prefer to follow large firms listed on major exchanges with lower performance volatility (Bhushan [1989], O'Brien and Bhushan [1990], Lang and Lundholm [1996]). Moreover, there is evidence that analyst following is impacted by institutional investor following and by voluntary disclosure, suggesting that there are opportunities to influence the likelihood of analysts following through these mechanisms (O'Brien and Bhushan [1990], Lang and Lundholm [1996]). There is only a limited literature on the press, but it indicates press coverage is highly correlated to both size and analyst following (Miller [2004]).

Obviously, the literatures discussed above are highly related and suggest an important role for IR in simultaneously addressing disclosure, visibility, and investor following concerns for companies. Due to the paucity of discussion of the complete IR process in the literature, the next section presents evidence on the components of an effective IR strategy based on a small sample of interviews and a related survey of IR professionals. Section 4 integrates this evidence with the prior literature to develop empirical predictions.

3. Overview of the IR Process: Survey and Interview Evidence

3.1 Interview and Survey Approach

[2] Factors such as stock ratings, growth, recent performance, risk, and dividend yield also significantly determine institutional investor ownership, but the sign of the relation depends on the institution's fiduciary responsibility and trading horizon (Del Guercio [1996], Bushee [2001]).

To gain a greater understanding of IR process for small and mid-cap companies, we conducted interviews with 11 IR professionals at 11 unique firms. We identified IR firms using web searches for firms that specialize in IR for small and mid-cap companies and recommendations from professionals who were being interviewed. Each interviewee devotes a significant portion of their time on investor relations for small and mid-cap companies. Most of the interviewees are the chief executive or partner in their firm, and many are founders. Several also have previous experience in a corporate IR function. Four of the IR firms are based in Boston and two in New York City, consistent with large local investor bases, and there is one firm each from California, Florida, Minnesota, Ohio, and upstate New York.

We conducted the interviews using open-ended questions and encouraging the IR professional to discuss their views on the most important aspects of the IR process. This approach resulted in far-ranging discussions, but we always ensured that several core issues were covered. These issues include the types of companies that retain their services; how they create and implement an IR strategy; the goals of that strategy; the role of institutional investors, retail investors, analysts, and the media; and the importance of accounting information and disclosure. The interviews generally lasted between 60 and 90 minutes.

At the completion of each interview, the IR professional was asked to complete a short web-based survey on creating successful IR programs (see Exhibit). The survey provides a more structured insight into the various activities required for a successful IR program. Every interviewee completed the survey and the findings are reported in Table 1. The survey was not intended to provide statistically testable data. Rather, its goal was to provide a numerical summary of the interviewees' views and a context for the statistical tests later in the paper.

3.2 Overview of the IR Process

The IR professionals said that the most common reason clients seek assistance with their IR strategy is that corporate management is unhappy with the current stock price, stock liquidity, or investor composition. In some cases, management receives suggestions to seek IR assistance from current shareholders or from potential investors. Several interviewees also said that Reg FD and the Sarbanes-Oxley Act have generated many new clients as companies conclude that they cannot navigate the more complex communication process. Moreover, both regulations are viewed as having decreased analysts' interests in following small and mid-cap firms, making it more important to have an effective way to attract that attention. Finally, some clients approach the firms due to a major transaction, an issue such as a delisting, or the pending retirement of the CEO. While those companies generally retain the firm to deal with that specific issue, they may decide to extend the relationship to cover general IR.[3]

Many IR professionals noted that they will not accept clients whose management is only looking for a short-term boost in stock price without the intention of developing a longer-term IR strategy. The interviewees all felt that involvement in such situations would have negative consequences for the IR firm's reputation with investors and information intermediaries. Further, several said such arrangements are not very lucrative as the first year of the relationship is often the hardest. Finally, almost all of the IR professionals expressed concern that such situations would inadvertently lead to being involved in a "pump and dump" scheme.[4]

Once an IR firm has been retained, the general IR process is relatively similar across most firms. In fact, one professional stated that the method is straight forward; it is execution

[3] Interestingly, the majority of the firms do not "cold call" for prospective clients. Instead, most attempt to keep an active profile so that companies will approach them once they decide they need help.

[4] Given the limited information environments and low liquidity surrounding many of these companies, people claiming to be IR experts often develop false disclosures to drive up prices on the firms, then sell their position prior to "pulling the plug" and moving on to the next firm. These pump and dump activities occur frequently enough that one of the IR firms runs a successful hedge fund that shorts against those stocks.

that is hard to replicate. First, the IR professional meets with management of the firm to determine their goals and their current communication strategy. Several professionals indicated this step is also performed to help educate management on what they have and have not been doing on their own. The IR professionals strive to ensure that management tells a single, clear story once they begin to interact with outsiders, as disagreement in front of potential investors is considered "deadly" by several professionals. Several of the firms undertake a ratio-based benchmarking of the company against its competitors. These professionals said management often has an overly optimistic view of the company and the benchmarking helps management understand their standing in the market. Further, investors often use similar benchmarks; thus, managers should be aware of their market position and be able to explain it.

Once the internal evaluation process is complete, most IR professionals begin fact-finding interviews of current shareholders, prospective investors who have recently declined to invest, and institutional investors that hold similar firms. As Table 1 shows, most IR professionals consider this an important step in the IR process, with a mean (median) rating of 5.8 (6) on a 7-point scale. These interviews are compared to the internal analysis and a strategy is designed to allow management to more successfully communicate their view of the company. Most IR professionals indicated that it is often just a matter of finding the right way to tell the story to the right investors.[5]

The strategy for attracting and maintaining investors generally includes plans for what information is needed and how it should be disseminated to investors, analysts, and the media. The IR professionals stressed that the strategy must be based on an honest analysis of potential investors for the company, which is often done by using prior investments, stated investment

[5] Occasionally, the fact-finding interviews indicate problems within the company that require restructuring of some sort. However, Table 1 notes that the importance of repositioning the company name or branding strategy received a much lower importance rating than identifying potential investors and surveying current market perceptions.

interests, or prior experience with the investor (the mean (median) survey response of 6.1(6) supports the importance of this analysis). They also made it clear that these strategies, and the order in which various groups are targeted, depends heavily on the type of company involved.

As an example, for small firms with little trading volume, the IR strategy will first focus on creating the stock market attributes, such as liquidity, that will make the stock a viable candidate for investment by larger investors. In this situation, several IR professionals said they would try to get current investors to be more active and to build some retail investor following. This sort of strategy may start with a direct mail contact to current investors and a press release announcing the new IR strategy and pointing out the positives of the firm (one interviewee describes this step as "waking up dormant investors"). The initial push would be followed by attempts to get more press coverage, by contacting high-likelihood retail investors, and perhaps by contacting smaller institutional investors. Once liquidity improves and the company begins to build a higher profile via disclosure and the press, the company can begin to target larger institutional investors. Conversely, for a mid-cap firm that already has liquidity and visibility, the strategy may begin by immediately pitching the company to analysts and larger institutional investors. Regardless of the strategy followed, all IR professionals agreed it was important to view this as a long-term project. As one interviewee describes it, "IR is like Chinese Water Torture, you just keep dripping it out there and eventually people break."

3.3 Buy-Side Investors

In almost every discussion, IR professionals stated that direct communications with buy-side investors is one the most crucial steps in the IR process. In the survey, the importance of raising general awareness with buy-side investors received a mean (median) rating of 6.9 (7). Many of the IR professionals believe that buy-side investors are essential for creating a stable

base of sophisticated investors that have the ability to understand the company. Further, once a company attracts one or two buy-side investors, other buy-side investors are more willing to hear the company's pitch. This buy-side interest encourages sell-side analysts to follow the firm and attracts press coverage, all of which help attract a dedicated retail following (one IR professional referred to this as "the circle of influence"). Similarly, it was widely stated that a few initial buy-side investors may have enough impact to increase the trading activity in the stock, making it more attractive to a broader class of large investors.

Almost all of the interviewees stressed that managers must be realistic in approaching the buy side. Small firms that do not trade on a major exchange and have low trading volume are generally a hard placement. These firms lack the investment viability attributes required to attract analysts and large institutional traders. In these situations, the IR professional attempts to target buy-side investors that specialize in small or micro cap firms, that invest heavily in the company's industry, that are willing to hold riskier securities (e.g., hedge funds), and that manage relatively small funds. One IR professional described this latter target as matching "orphaned investors to orphaned stocks." Several interviewees said that having relationships with a large number of these lesser-known buy-side investors was essential for their IR business.

Finally, all of the interviewees noted the importance of face-to-face contact between management and the buy-side investors. In the survey, the importance of company management meetings with the buy side received a mean (median) score of 7(7) (this was the only question to receive a unanimous rating of 7). In contrast, IR professional meetings with the buy side were rated as relatively unimportant with a mean (median) score of 2.45 (1). Many interviewees stated the company could have an excellent business plan, but buy-side investors need to have faith in management, and direct meetings are crucial in developing credibility. Most IR

professionals attempt to get management to dedicate at least two-to-three days a quarter to investor meetings. Further, they stressed that management must commit to continued meetings once an investor has taken a position. After the meetings, most of the interviewees stated that they perform follow-up calls with the investors to fill in any remaining information gaps and to determine if there is a need to modify management's message in future presentations.

3.4 Retail Investors

Retail (or individual) investors are generally viewed as less important than the buy side. The mean (median) survey scores for both general awareness and management presentations to retail investors were 4.09 (4) and 4.4 (4), respectively. Opinions on retail investors varied greatly across interviewees. Most interviewees felt that a dedicated retail investor base could be beneficial to a firm, but many felt that targeting these investors was simply too difficult. As one consultant said "it is to hard to manage, you just throw it out there and hope it takes with someone….Even if it works initially, keeping the excitement going is difficult." However, other professionals felt that, with the proper approach, retail investors could become an important part of the ownership base. For example, one IR professional said firms with strong local presences, such as banks or utilities, could contact retail stock brokers in their areas of service and use the broker as a conduit for attracting retail investors who were familiar with these firms. Similarly, firms with a widely known consumer product may be able to target users of that product as investors. Several others use web pages to provide information on clients and allow individuals to be put on an e-mail list that will alert them each time an information event occurs.

3.5 Sell-side Analysts

Many IR professionals felt that sell-side analysts play an important role in gaining and retaining visibility for a firm. The survey found that the importance of increased visibility with

analysts received a mean (median) rating of 5.3 (6) and management meetings had a mean and median rating of 6. Several interviewees stated that analyst exposure may lead to the company being included either in industry reports or as an industry comparison in a report on a larger company, creating both visibility and credibility. However, many of them felt that attracting an analyst following is unlikely for most small and many mid-cap companies. Several IR professionals explained that analysts directly tell them that their clients do not generate enough volume, and thus trading fees, to justify coverage by the analyst's firm. One IR professional stated that the best a company can expect is to be the "back pocket" stock that an analyst may mention if they are asked for "anything else they like." Most of the interviewees felt that analyst coverage comes slowly and is driven by interest from other parties, especially the buy-side. Many of the interviewees also said they specifically tell clients not to anticipate analyst coverage until the firm grows, regardless of the success of the other components of the IR strategy.

3.6 The Media

The survey suggests that IR professionals believe it is important to increase awareness in the media (mean and median rating of 6). As might be expected, several interviewees said media coverage can act as an effective tool to communicate to retail investors. The interviewees noted this strategy is more useful if the current and potential shareholders are concentrated in a geographic area, as it allows the company to focus on regional media, which are often more willing than the national media to carry a story on a small companies.[6]

Surprisingly, the majority of interviewees also viewed media coverage as helpful in attracting and retaining the buy side and analysts. The most frequently mentioned benefit is that

[6] Most interviewees felt that coverage in major news outlets, such as *The Wall Street Journal*, *Barron's*, or *The New York Times*, is the most effective in impacting the buy side and analysts. Several interviewees also felt that coverage in trade journals can be beneficial as the "better" analysts and buy-side investors rely heavily on trade journals.

coverage adds "credibility" to the company. Seeing the company mentioned in the press suggests the company is "a player" or "should be on their radar screen." Several interviewees noted that press coverage is particularly effective when the article includes a positive quote from another buy-side investor or an analyst. Interviewees did not believe that most buy-side investors would take a position solely on information in the press; only that investors would start considering the firm. Several interviewees also noted that increased press coverage made an analyst's job easier. In fact, one interviewee said they have "placed" information in the press before and then seen it show up in analysts' reports.

Most interviewees also felt that management must be cautious in using the press. A common concern is that press coverage could lead to a "pop" in price that could not be sustained. Further, several IR professionals were concerned that large price movements could attract short sellers who would then actively work against the firm and/or generate law suits when the price dropped. Thus, most professionals asserted that press coverage is most useful if it is consistent and sustained. Further, several said companies should not try to tell "complicated" stories in the press. Thus, if the "easily observable indicators, like earnings, look negative, it is best to avoid press coverage and take your story directly to investors."

Similar to the investors and analysts, the survey shows that IR professionals believe that direct access with management is the most important aspect in dealing with the press (the mean (median) rating of 5.6 (6) for are the highest of any of the categories of press coverage).

3.7 Disclosure

During the interviews, we asked general questions about the role of public disclosure and, in the survey, we focused on four categories of disclosure (earnings announcements, annual reports, general press releases, and the company web site). As shown by the survey results,

public disclosure is generally considered important, but not as important as direct contacts with investors and information intermediaries. Our interviews found that IR professionals view disclosure as being very conditional. In some situations they felt it is very important, but in others they felt that standard practices are fine.[7]

Many interviewees indicated that the base level of disclosure in the US is generally high and, thus, is not an area that allows for much additional opportunity. However, several noted that low levels of disclosure are sometimes an issue for smaller, less sophisticated companies. One interviewee noted disclosure is much more important when representing foreign firms. In the survey, there was a high level of importance placed on increasing the quality of disclosures, especially in earnings announcements and general press releases (both of which received median rankings of 7). As one respondent said "Investors and analysts are bombarded with disclosures every day, you have to make yours count. Then they will keep paying attention in the future."

4. Empirical predictions and research design

4.1 Empirical Predictions

Based on the above literature review and investigation of the IR process, we expect that the IR process and its outcomes will vary depending on the type of company hiring the IR firm. For small companies or those that do not trade on major exchanges, the IR strategy will first have to focus on developing the "investment viability attributes," such as sufficient information disclosures, press coverage, and trading volume, that allow a company to be considered by larger institutions and sell-side analysts. We anticipate these companies will follow an strategy of first "waking up" the investor base by increasing disclosure, attempting to attract press coverage, and taking other actions (e.g., direct contact with current investors, employee outreach programs etc.)

[7] In fact, one interviewee did not respond to the disclosure questions in the survey due to their conditional nature, several others followed up afterwards to indicate they found those questions difficult to answer unambiguously.

that will result in increased trading activity.[8] New institutional investment and analyst following are expected to be attracted to the stock later, after investment viability has improved and the company's management has had a chance to do "road shows" with investors and analysts. One caveat is that increases in institutional investor following for OTHER OTC companies may be limited by constraints on holding stocks traded on less liquid, higher fraud exchanges.

Companies traded on major exchanges often already have investment viability attributes. Thus, we do not expect to see major changes in these characteristics for larger companies. However, our interviews suggest that face-to-face meetings between management and investors/analysts (often more than one for each investor) are crucial in developing credibility for the management team and, thus, successfully targeting these entities. Even if investors and analysts are immediately willing to meet with management, it takes time to schedule and execute these "road shows." Further, there are many mid-sized companies competing for a chance to "pitch" to the investors, meaning there could be a relative visibility issue that results in a significant lag before a company is able to get on investors' schedules. Combined, these factors suggest that even companies on more visible exchanges will experience a lag prior to attracting increased institutional investor and analyst following.[9]

We expect that companies experiencing early success in increasing investment viability (disclosure, press coverage, market liquidity) will experience greater success in subsequently attracting institutional investment and analyst following. Finally, we expect that companies with

[8] As Hong and Huang [2003] point out, liquidity is also likely to be one of management's desired final IR goals. However, because it is an important step in reaching the other desired "IR outcomes", and it is an attribute that can be impacted quickly via strategies to wake up the current investors, we include it as one of the viability attributes.
[9] We present our primary analysis with partitions by exchange, rather than firm size, because firms listed in the OTHER OTC markets have dramatically lower investor and analyst following (even conditioning for size), consistent with lower visibility and higher fraud for these markets. We estimate all of our results using size partitions, and find that results for small (medium) firms are similar to those for OTHER OTC (NASDAQ) firms.

successful IR programs, either through increased investment viability or increased following, will also experience a significant increase in market valuation, consistent with Merton [1987].

4.2 Research Design

We test for increases in these variables using a "double control" research design. First, we examine the seasonal change in each outcome variable (i.e. the difference between the current period and the same period in the prior year) for various periods after the event date of hiring the IR firm, allowing the company to serve as its own control. We use seasonal changes to control for spikes in trading activity, analyst following, and press coverage that often accompany annual earnings releases, seasonality in the underlying business, and any time-of-the-year effects (such as tax-motivated trading or the "January effect").

Second, we compare this company-specific change to changes over the same period for a set of control companies that did not hire IR firms. During the sample period, the stock market rose and fell, the economy entered a recession, and scandals in the investment banking industry led to a retrenchment in analyst coverage, especially for smaller firms (Leone [2004]). These market-wide effects likely had an impact on investor following and company visibility beyond hiring the IR firm. Because these effects had differential impacts on various market segments, we choose control companies that are matched with test companies based on exchange listing, industry, time listed, and prior institutional investor following (as a proxy for size and visibility).

We proxy for increases in information releases with the log of the number of press release wires (*LNPRW*) on Factiva. As there is no editorial coverage decision for these wire services, they represent a decision by management to provide information to outsiders. We proxy for press coverage as the log of the number of articles about the company appearing in edited sources (*LNEDS*); i.e. those where the news agency makes an editorial decision about

whether to carry the item. We form this group by choosing "All Sources not Press Release Wires" in Factiva. Both variables are computed quarterly beginning on the day the company announced the IR firm had been hired.[10] If a company did not exist for the entire quarterly period, we drop the observation to prevent unusual coverage surrounding an IPO or delisting from contaminating the measure.

We examine two measures of trading activity. First, we use the log of monthly share volume (*LVOL*). We use share volume rather than share turnover (i.e., volume divided by shares outstanding) because shares outstanding is often missing or unreliable for companies traded on the OTC Bulletin Board or the Pink Sheets (Bushee and Leuz [2005]). Moreover, the primary purpose of using share turnover is to control for scale differences, which should not be a problem in our research design as we compare company-specific changes in volume to similar-sized control firms. Second, we compute the percent of days traded in the month (*PDAYS*), defined as the number of days with a nonzero volume in the month divided by the total number of trading days. This measure is likely a better proxy for trading activity than share volume in low-liquidity OTHER OTC markets (Bushee and Leuz [2005]). Thus, we expect to see any significant changes in this measure primarily concentrated in those markets.

We also examine two measures of institutional investor following. First, we use the log of the number of institutional investors that have nonzero holdings in the stock (*LNIH*). This measure has been used in prior research as a proxy for institutional following (e.g. O'Brien and Bhushan, [1990], Walther [1997], Amihud et al. [1999]) and does not require data on total shares outstanding, which are missing for some firms in our sample. This variable also reflects the number of new institutions that are attracted to the stock. Second, we compute the percentage ownership by institutional investors (*PIH*), defined as total shares owned by institutions divided

[10] In some cases, we were only provided the month the IR firm was hired, and we consider the 15th as the hiring day.

by the total shares outstanding. This construct is the most commonly used proxy for institutional ownership (e.g., Bushee [2001]; Gompers and Metrick [2001]). Also, if IR activities are more effective at "waking up" the existing investor base than attracting new investors, this measure will pick up any increases in holdings by existing investors that are not accompanied by increases in the number of institutions. These variables are available each calendar quarter end. For both measures, we assume that institutional holdings are zero for any period when the company is listed on an exchange but there is no data available on institutional holdings.

We use the log of the number of analysts issuing earnings forecasts (*LNAL)* as the proxy for analyst following (O'Brien and Bhushan [1990], Botosan [1997]). We compute this measure by counting the number of unique analysts issuing an earnings forecast for any horizon during a calendar quarter. By measuring this variable over a quarter, we avoid any biases due to increases in coverage immediately prior to earnings releases. As in the case of institutional ownership, we assume analyst following is zero for any period when the company is listed but there is no data available on analysts' forecasts.

Finally, we proxy for valuation impacts with the change in the book-to-price ratio (*CBP*). We use this measure to capture a notion of "undervaluation" that can be corrected by IR actions.[11] We compute this measure as the difference between the book-to-price ratio at the last fiscal year end prior to the company hiring the IR firm and the first fiscal year end occurring more than one year after hiring the IR firm. We require at least one year after to ensure that the IR actions have had sufficient time to have an impact. Following prior work, we exclude any observations with a negative BP ratio at either point (e.g., Liu, et al. [2002]).

[11] Other possible measures are the earnings-price (EP) ratio and stock returns. The problem with the EP ratio is that almost half of our sample companies have negative earnings. The problem with stock returns is that the timing and direction of the effect is unclear. Companies with successful IR programs should first experience positive returns in correcting an undervaluation and then, at some point, lower returns that reflect the lower cost of capital.

5. Sample and data

5.1 Sample

Our test sample consists of 184 companies hiring IR firms between 1999 and 2004. We obtain our sample from a number of sources, documented in Table 2. First, starting in January 1999, PR Newswire issues a weekly "Agency Roster" which summarizes "account wins" by PR and IR firms during the prior week. From this roster, we select only those new accounts that explicitly state that the IR firm was hired for investor or media relations.[12] We find 122 companies through the Agency Roster. Second, using the list of IR firms announcing clients on the Agency Roster and a list of IR firms obtained from the National Investor Relations Institute, we searched Factiva for any additional press releases announcing new clients that were not picked up by the Agency Roster.[13] We found an additional 17 companies in this manner. Third, we went to the websites of those IR firms to check whether they posted a client list with the dates each client signed with the IR firm. We found 13 companies on IR websites. Finally, we contacted all of the IR firms on the NIRI list of firms to ask whether they had any additional clients not found in any of these other sources. Three IR firms were willing to provide client lists and dates, adding another 32 companies to our sample. Most of the remaining IR firms had a standard policy of signing non-disclosure agreements that forbade them from providing client information without express approval, and they were unwilling to seek approval for this study.

There are 33 IR firms that were hired by the sample companies; however, four firms account for roughly half of the sample and only 11 firms have five or more clients in the sample.

[12] We drop companies that hire IR firms for stated reasons such as advertising, public relations, agency of record services, or specific promotions (e.g., publicizing the company's centennial). We also drop any private companies. If no detail is given in the Agency Roster, we refer to the original press release from earlier in the week to determine the reason the company hired the IR firm, and we drop any companies for which we cannot find the reason for hiring the IR firm.

[13] In discussions with people at IR firms, we were unable to determine what criteria are used by PR Newswire for inclusion of new accounts on the Agency Roster.

The industry representation of the sample is quite broad. Using industry definitions from Datastream, there are 59 industries represented in the sample and only two industries—computer services (8%) and software (6%)—account for more than 5% of the sample observations. Table 2 shows that the sample is fairly evenly distributed across the years 1999 to 2004, indicating that there has been relatively constant demand for IR services over the past five years. Over 75% of the sample consists of companies trading on the NASDAQ (42%) and the OTC Bulletin Board (OTCBB) (35%). The remainder of the sample trades on the NYSE (9%), AMEX (8%), and the Pink Sheets (6%). In the subsequent analyses, we put these exchanges into three groups: NYSE/AMEX, the NASDAQ, and the OTHER OTC markets (OTCBB and Pink Sheets).[14]

We obtain stock return, trading volume, and market value data from the Datastream International database. Datastream is updated more frequently than CRSP and follows a larger number of OTCBB and Pink Sheets companies. Institutional investor data are obtained from the Thomson Financial Spectrum database of quarterly Form 13F filings. Data on analyst following are obtained from the I/B/E/S database. We use the Factiva "Intelligent Indexing" service to obtain press release and press coverage data.[15] Finally, we obtain data on company characteristics from the Compustat database, supplemented with hand collection from Edgar for companies that file with the SEC but are not picked up by Compustat.

[14] Prior to 1999, companies could trade on the OTCBB without filing with the SEC if they met certain size and ownership requirements. The adoption of the "eligibility rule" in 1999 forced OTCBB companies to file with the SEC to stay in the market. This rule forced over 3,000 firms into the Pink Sheets, where companies can trade without SEC filing. However, both markets do not have any other listing requirements or fees; companies need only to have a market maker willing to quote them in the market (see Bushee and Leuz [2005] for more details).

[15] There are two alternatives for searching companies on Factiva: Intelligent Indexing and Free Text. The Indexed search picks up only those articles that Factiva considers to be about the company, whereas Free Text picks up any mention of the words in the company name. The disadvantage of the Indexed search is that some mentions of the company are missed by Factiva in the indexing process, especially when the company is briefly mentioned in an article about another company. The disadvantage of Free Text is that any use of the company name is picked up, and not all of these are relevant, e.g., a mention in an obituary. Because we rely solely on article counts, we believe the Indexed search will contain less noise. Our results are similar when we use the Free Text Search.

Before collecting data for our sample companies, we compiled a history of all name changes, ticker symbol changes, and movements between exchanges to ensure we found all data for the company on each database. For companies trading on the NYSE, AMEX, and NASDAQ, we used the CRSP database to compile the history. For companies trading on the OTCBB and Pink Sheets at any point in their history, we used the Daily List on the OTCBB website (www.otcbb.com) to track any changes.

We form a sample of control companies that did not hire IR firms by matching based on exchange listing, industry, time listed, and institutional investor following immediately prior to the time each sample company hired the IR firm.[16] We did not attempt to match based on company size because market values are often unreliable for firms traded on the OTCBB and Pink Sheets (Bushee and Leuz [2005]). However, the institutional investor following variable should serve as a good proxy for company size (Gompers and Metrick [2001]). We use the following algorithm to find control companies. First, we pull a list of all companies in the same industry and traded on the same exchange as the sample company at the time it hired the IR firm. Next, we search for the closest match in institutional investor following within the set of companies whose time listed was within two years of the sample company.[17] We then follow the same procedure of compiling company histories for the control companies to ensure we collect all available data.

5.2 Descriptive statistics

Table 3 presents means and medians for several company characteristics for the test and control samples prior to the date the test companies hired the IR firms (hereafter, the *IRDATE*).

[16] Although some of our control companies may have retained the services of an IR firm, our tests are centered in event time, and it is unlikely that both the sample company and the control company hired IR firms at the same time. In addition, the inclusion of any control companies that hired IR firms would weaken the power of our tests.

[17] In only one case—a "farming and fishing" company traded on the AMEX—were we not able to find a close match. For this firm, we used the closest match on the NYSE within the same industry.

This comparison provides evidence on whether the control sample is a good match for the test sample or, conversely, whether there are any company attributes that appear associated with the decision to hire the IR firm. We examine three size measures: market value of equity (*MVAL*), total assets (*TA*), and sales (*SALES*). Log measures (*L_*) are also provided for variables such as these with skewed distributions. We report an indicator for membership on the S&P500 (*SP500*), the earnings-to-price ratio (*EP*), a measure of leverage (*LEV*) (computed as the debt-to-assets ratio), and the number of owners of record (*NOWN*). Finally, we report one-year changes in the following variables: market value (*CLMV*), total assets (*CLTA*), sales (*CSALES*), earnings (*CEPS*), leverage (*CLEV*), number of owners (*CNOWN*), and shares outstanding (*CSHRS*).[18]

In every case, the means and medians of these variables are not significantly different between the test and control sample. Thus, our matching algorithm has successfully controlled for a large number of company characteristics, and it is unlikely that any of these characteristics will explain differences in visibility or investor following after the *IRDATE*. This comparison also suggests that the motivations for hiring IR firms are not clearly apparent from looking at common size, growth, performance, or risk proxies.

In Panel B of Table 3, we report means and medians for the level of the test variables in the quarter prior to the *IRDATE*. For ease in interpretation, we present the raw numbers of press coverage, institutions, and analysts rather than the log variable. The only significant difference for press releases (NPRW) is for OTHER OTC companies, where test companies have higher numbers of press releases prior to the *IRDATE*. There are no significant differences in coverage by edited sources (*NEDS*) between the two samples. The test companies also had significantly higher levels of trading activity (*LVOL* and *PDAYS*) in the quarter immediately prior to the *IRDATE*, with the difference driven entirely by the OTHER OTC markets. Also note that the

[18] For all variables with outliers, we windsorize the extreme 1% of each tail.

percent of days traded (*PDAYS*) is likely to be a powerful measure only in the OTHER OTC markets; the median is 100% in the other markets.

Given we chose our control sample based on number of institutions (*NIH*), it is not surprising that the means and medians are not significantly different. This matching procedure also ensured that the percentage of institutional ownership (*PIH*) and number of analysts (*NAL*) are not significantly different between the two samples. However, the table shows dramatic differences in the level of following across exchanges. NYSE/AMEX companies have, on average, over 80 institutions and 4 analysts following their stock, compared to 30 and 2 on the NASDAQ, respectively. In the OTHER OTC markets, companies have, on average, less than 1 institution and analyst following their stock. This result is consistent with fiduciary or liquidity restrictions that many institutions face when considering investments in low liquidity, high fraud markets such as the OTCBB and Pink Sheets. It also suggests that IR firms face a potential barrier to attracting institutions and analysts to this market segment. Finally, the table shows no significant differences in BP between the test and control firms prior to the *IRDATE*.

Overall, the only major significant differences between the samples prior to the *IRDATE* is that test companies on the OTHER OTC exhibit both higher trading activity and higher press release issuance prior to the hiring of the IR firm. However, note that this difference cannot be driven by test companies going IPO prior to hiring the IR firm because we require the company trade for the entire quarter prior to the IR date to be included in the press coverage sample.[19]

6. Empirical Results

6.1 Investment viability attributes

[19] In Section 6.5, we discuss the results of logit analysis on the decision to hire an IR firm. Not surprisingly, we find few significant determinants of the decision, consistent with the univariate evidence.

Table 4 reports mean and median changes in disclosure and press coverage, as well as the percent of changes that are positive, for one quarter before and four quarters after the *IRDATE*. We require that companies be listed for the full quarter to avoid situations where IPOs or delistings create unusual press coverage. For these tests, quarter 0 refers to the three months prior to the *IRDATE*, quarter 1 is the three months subsequent to the *IRDATE* (including the *IRDATE*), and so forth to quarter 4. For each quarterly change, we require that the test company and its matched control company both have nonmissing data to be included in the table. However, we allow the number of matched pairs to vary by quarter. All significance tests are one-tailed where we have a prediction (e.g., increases for test companies and larger increases for test companies than for control companies) and two-tailed otherwise.

In panel A, we find significant increases in press release wires (*LNPRW*) for the test companies in each of the four quarters after hiring the IR firm. These increases are statistically greater than those of the control sample in three of the four quarters, suggesting that test companies increase their disclosure activities after hiring the IR firm. There is strong evidence of a consistent increase in disclosure for the OTHER OTC companies, as well as more limited evidence of an increase for NASDAQ companies. This finding supports our expectation that less visible companies are more likely to make adjustments to disclosure in an attempt to create the viability attributes needed to attract increased investment.

In contrast, the smaller increases in articles in edited sources (*LNEDS*) in Panel B shows the greater difficulties in increase press coverage. Most of the significant increase is driven by OTHER OTC companies, highlighting the importance of creating more visibility for such firms. In raw terms, these companies experience an increase of approximately 5 articles in edited

sources and 7 disclosures on press release wires on an annual basis. There is little evidence of increased press coverage for companies on the major exchanges.[20]

Table 5 presents changes in trading activity measures after the hiring of the IR firms by the test companies. We compute the change in the trading activity variable by first taking the average of the three months in the quarter and then subtracting the average of the variable in the same quarter one year earlier.[21] Panel A presents results for changes in share volume (*LVOL*). Starting in the three months prior to the *IRDATE* and continuing through the next four quarters, the test sample exhibits significantly higher changes in volume both in absolute terms and relative to the control sample.[22] This evidence is consistent with our expectations, suggesting that IR firms are effective at encouraging investors to re-evaluate their positions in the companies and thereby create more liquidity in the companies' shares. The main driver of this result is significantly higher share volume for the OTHER OTC companies, which experience over a 15% increase in share volume by quarter 4 with almost two-thirds of test companies experiencing increases in volume. This evidence is again consistent with our expectations that the potential visibility impact of IR firms is largest for companies in these markets.[23]

Panel B confirms that this increase in trading activity is also apparent in the percent of days traded (*PDAYS*), with much of the result driven by increases in the OTHER OTC markets. For test companies in the OTHER OTC, the average change in *PDAYS* is 0.106 in quarter 4,

[20] We also looked for increases in press coverage in what the IR professionals consider the "gold standard" of the business press (i.e., *Barron's*, *Business Week*, the *Financial Times*, *Forbes*, *Fortune*, the *New York Times*, and the *Wall Street Journal*). In general, the test and control companies received very little coverage in these outlets and there were no significant increases in coverage for either group after the *IRDATE*.

[21] We define the first month of quarter 1 as the 21 trading day period ending one day after the *IRDATE*. We use this definition because the *IRDATE* is not always exact for sample companies. For example, companies obtained from the Agency Roster may have commenced their relationship with the IR firm at any point during that week.

[22] Further analysis indicates that the significant spike in quarter 0 volume is driven by a spike in the month immediately prior to the *IRDATE*; the change in not significant in the other two months of quarter 0.

[23] We also examined changes using share turnover (i.e., volume divided by shares outstanding). The increases in turnover for test firms remain significant, albeit at a lower level, despite the loss of 15% of the OTHER OTC firms due to missing shares outstanding.

which represents an extra two days traded per month, compared to the mean level of 16 days (0.764) prior to the *IRDATE*. However, the median change in *PDAYS* is zero for the OTHER OTC test companies and the percentage of positive changes is not significantly different between the two samples. Thus, the majority of test companies in the OTHER OTC experience higher volumes of share traded, but do not necessarily trade on more days of the month. In any case, the evidence is Table 5 suggests that IR firms have an immediate and persistent effect on trading activity for companies in the OTHER OTC market.[24]

Overall, the evidence of immediate and persistent increases in disclosure, press coverage, and trading activity for the OTHER OTC firms are consistent with our prediction that IR can be an effective tool for creating timely and significant changes in the visibility and investment viability of low visibility or thinly-traded companies.

6.2 Institutional investor and analyst following

We next examine the changes in institutional investor and analyst following after the hiring of the IR firm. For both tests, the periods are calendar quarters tied to the Form 13F reporting requirements of institutional investors.[25] Quarter 0 is the calendar quarter that contains the *IRDATE*. Because only a portion of the quarter occurs after the *IRDATE*, we do not expect much impact in this quarter. Quarters 1 to 4 are the four subsequent calendar quarters.

Panel A of Table 6 presents results for changes in the log of the number of institutional investors (*LNIH*). There is no significant change in institutional ownership in quarter 0 or quarter 1, the first full calendar quarter after the *IRDATE*. In quarters 2-4, the test companies

[24] Some IR professionals we talked to indicated a concern with their activities increasing volatility in conjunction with increasing volume. We ran a similar analysis using return volatility, measured as the monthly standard deviation of daily returns. We found no evidence of significant increases of volatility. The only significant changes were a significant decrease in volatility for NYSE/AMEX companies in the two quarters after the *IRDATE*.

[25] For analyst following, forecast data are available monthly and we did not necessarily need to follow the same quarterly reporting convention. However, because analyst coverage increases near earnings releases, we want to use quarterly periods to ensure that every period has an earnings release. Also, using the same calendar quarters enhances comparability between the institutional investor and analyst following results.

experience significant changes in institutional following that are also significantly greater than changes for the control companies, which actually experience mean decreases in institutional following. Note that these quarterly changes are not necessarily independent; i.e., an increase in institutional following in quarter 2 that persists will also show up as an increase in quarter 3, relative to the prior year. Thus, the evidence suggests that the test firms tend to experience increased institutional following in quarter 2 and maintain or slightly increase it in the subsequent quarters, consistent with the expected time delay in IR's impact on institutions.

Most of the results in Table 6 are driven by increases in following for NASDAQ companies. The quarter 4 change of 0.097 represents an increase of roughly 4 institutions relative to the period prior to the *IRDATE*, a 12.5% increase over the pre-*IRDATE* level of 32 institutions. Although there are also significant differences between the test and control samples for the OTHER OTC companies, much of the difference is driven by the control companies losing institutions over the sample period. The increases for the test companies are weakly significant, but represent fewer than 1 additional institution, on average, and only 20% of the test sample had a positive change in institutional following. This evidence suggests that the efficacy of IR activities in attracting institutions is limited in the OTHER OTC market, at least in the short-term, due to fiduciary or liquidity restrictions. However, the increase in trading activity in this market suggests that IR activities are effective at attracting non-institutional investors, such as hedge funds or retail investors, to these companies.

Panel B of Table 6 presents results for the percentage of institutional ownership (*PIH*). There is a significant increase in *PIH* for the test firms in quarters 0 and 1, which suggests existing owners increased their stake (as the change in number of institutions was not significant in these quarters). However, this result is likely driven by a few firms as the percent of positive

changes is below 40% and the increases are not significantly different from the changes in the control sample. The increases in *PIH* are strongly significant in quarters 2-4, both in absolute terms and relative to the control sample, which corresponds to the significant increase in *LNIH* in this quarter. Again, the majority of this result is concentrated in NASDAQ companies.

In Table 7, we present results for changes in the log of number of analysts (*LNAL*). Similar to the results for number of institutions, analyst following does not significantly increase for test companies until two quarters after the *IRDATE*, at which point the increases are both significantly different from zero and from the changes in the control sample. This finding is supports our expectation that analyst following would only increase concurrently with, or subsequently to, increases in institutional investor following, which is also consistent with O'Brien and Bhushan [1990]. Similar to the results for institutions, the overall findings are driven by the NASDAQ companies, and the control companies exhibit negative mean changes in analyst following (consistent with Leone [2004], which documents significant losses in analyst coverage for many small companies). The mean quarter 4 increase of 0.133 in *LNAL* for NASDAQ companies represents an increase of less than 1 analyst in raw terms. Moreover, the median changes are zero for all exchanges and the percent of positive changes is generally less than one-third. Thus, IR activities are only effective in building analyst following for a small subset of firms. The IR firms had almost no impact for OTHER OTC companies, as only 2% of test companies experienced an increase. As shown in Table 3, very few companies have any analyst following in this market, and these results suggest that IR activities alone are not sufficient to build a following.

Overall, the results of this section suggest that there are significant increases in institutional and analyst following after a company hires an IR firm, but these increases only

materialize one or two quarters later, after there have been increases in trading activity and time to implement face-to-face meetings. The increases in investor following are primarily driven by NASDAQ companies, which have a modest level of following prior to the event date. IR activities have no impact on following for NYSE/AMEX companies and little or no impact for OTHER OTC companies, which exhibit almost no following prior to hiring the IR firm.

6.3 The Impact of Changes in Investment Viability on Investor and Analyst Following

Our prior results establish that IR firms' activities have an immediate impact on the investment viability attributes that make the company attractive to investors. They also show that many companies are able to attract an increased level of following by institutional investors and analysts. In this section, we examine whether companies that achieve an early change in their investment viability have greater subsequent changes in institution or analyst following. We partition both the test and control samples based on whether the companies experienced an increase in at least one of the three viability attributes (disclosure, press coverage, and trading activity) during the first two quarters after the hiring of an IR firm. We then compare the changes in institutional investor and analyst following between quarters 2 and 4 across the partitions.

Table 8 shows that the test companies that increase their investment viability also experience a significantly greater increase in both the number of institutions and analysts following the company. This increase is significant both in comparison to other companies that hire IR firms but did not increase their investment viability and to control firms which increase their viability, but did not hire an IR firm to help translate these increases into changes in following. This finding is driven predominately by NASDAQ companies, again consistent with

our prediction that these mid-sized companies are most likely to impact their following by increasing their investment viability attributes.

6.4 Valuation Impact

In this section, we examine whether hiring an IR firm can also impact market valuation and, if so, whether the impact is related to the previously documented changes in investment viability and following. We expect valuation impacts to occur both due to the more immediate changes in viability attributes and to the slower changes in following. Thus, we examine changes in valuation for at least one year following the hiring of the IR firm. As our proxy for valuation impact is the change in the book-to-price ratio (*CBP*), a *negative* change is expected; i.e., correction of an undervaluation leads to a lower *BP* ratio.

Panel A of Table 9 documents that the test companies experience a significant decrease in book-to-price (that is, improved valuation), in both absolute values and relative to the control firms. These results hold for NASDAQ and OTHER OTC firms, but not for NYSE/AMEX firms, consistent with our prediction that less visible firms are more likely to benefit from undertaking IR activities.

Panels B and C examine whether increases in investment viability attributes (Panel A) or following (Panel B) lead to greater impacts on the book-to-price ratio. Despite small sample sizes in the partitions, the results are generally consistent with improvements in both factors leading to improvements in the book-to-price ratio. Changes in investment viability have a significant impact on *CBP* for both NASDAQ and OTHER OTC companies. The impact of changes in following is driven primarily by NASDAQ firms, consistent with these companies being most able to use IR to significantly impact institutional investor and analyst interest in the

firm. Only three OTHER OTC companies experience increased following, limiting the power of the test in this market.

6.5 Alternative Explanations for the Empirical Results

This paper focuses on the consequences of adopting an IR strategy. As our interviews in section 3 indicate, there are many reasons that companies hire IR firms. While developing a greater understanding of those reasons would be interesting, it is a sufficiently rich topic that it merits a separate study. Our primary concern in this study is whether the reasons for hiring an IR firm introduce a correlated omitted variable that systematically affects the body of results. However, our predictions are multifaceted and nuanced: we predict timing differences in the impacts of IR with viability attributes changing quickly while following evolves more slowly; we predict the two sets of outcomes will exhibit a lead-lag relations; and we expect differing impacts depending on the exchange listing of the company. We believe it is unlikely that any correlated omitted variable would produce the same complex set of results. However, to be complete, we discuss several potential correlated omitted variables below.

First, we note that our comparison of test and control samples in Table 3 indicates the companies are similar along a number of dimensions. We expand these univariate tests by performing logit analyses to examine differences between our tests and control firms. We examine several different combinations of the variables examined in Table 3. We consistently find that test companies have significantly higher book-to-price, higher trading volume, and smaller size in the period before the IR firm is hired (not tabled). These characteristics do not unambiguously explain our results because, while prior research shows that institutions and analysts prefer companies with higher volume, they also strongly prefer larger companies, and their preferences for BP are mixed. Moreover, it is not clear why these pre-existing differences

would manifest in a delayed change in following. Thus, our results would not be expected solely based on these few significant determinants of the decision to hire an IR firm.

Second, we use SDC data to examine the frequency of merger and acquisition activities. Given our prior findings on the valuation impact, companies involved in extensive M&A activities may believe it is important to be properly valued. Our test (control) companies undertake 75 (53) M&A transactions in the year prior to the *IRDATE* and 81 (53) transactions in the year following, suggesting merger activity is relatively stable in both samples and the relative difference between samples stays the same. However, the mean (median) transaction value for the test sample decreases from $82 ($14) million in the year prior to hiring an IR firm to $60 ($11) million the year following. In comparison, the control samples' mean (median) transaction value increased from $85 ($11) million to $133 ($22) million. Combined, this analysis suggests that increased M&A importance is not a correlated omitted variable.[26]

Third, we examine the frequency of seasoned equity offerings. The test (control) companies decrease the number of issuances from 39 (17) the year prior to hiring an IR firm to 31 (14) in the following year. The mean (median) size of the issues decreases for the test companies from $115 ($18) million to $102 ($9) million, whereas control companies have a mean (median) increase from $123 ($25) million to $196 ($40) million. Again, this analysis suggests that equity issuances are not a significant correlated omitted variable.

Fourth, companies anticipating a change of exchange listing may use IR firms to help manage investors as they make these changes. Given our findings on the importance of the

[26] For this, and several of the other potential correlated omitted variables, a finding of an increased level after the hiring of the IR firm would not necessarily mean that variable is actually driving our results. Rather, it would suggest that managers undertaking these activities feel that IR is an effective portion of making their overall strategy work. In fact, the hiring of the IR firm may actually have caused observed differences. For example, firms with effective IR programs may find M&A to be more attractive once their own firm has overcome visibility and valuation issues. Thus, increased levels of activity following the implementation of IR may be a consequence of the IR program, rather than a correlated omitted variable.

exchange listing, systematic changes of this type could impact our results. We find that four (three) of our test companies move "up" to a major exchange in the year prior to (following) hiring an IR firm. For the control sample, three (zero) move up in the year prior (following). There is also little activity in moving down from a major exchange, with four (eight) test companies moving down in the year prior (following) the *IRDATE*. Four control companies move down in each of the years. This analysis indicates that exchange changes are also unlikely to be a significant correlated omitted variable.

Fifth, it is possible that companies hire IR firms when they anticipate strong sales or earnings performance in the hopes of getting the greatest benefit out of that strong performance. However, almost 50% of our firms have negative earnings in the year following having hired an IR firm. Obviously, it would be difficult for an IR firm to use negative earnings as a strong investment argument. The mean (median) price-deflated change in EPS for the test companies in the year after the *IRDATE* is -0.023 (0.006), compared to 0.014 (0.002) for the control companies. For changes in sales in the year after the *IRDATE*, the mean (median) values for test companies are 0.439 (0.054), compared to 0.314 (0.056) for the control companies. In each of these cases, the values are not significantly different between the test and control samples.

Finally, it is possible that IR firms only agree to work with companies which they believe are about to have a turn-around. In this case, the IR firm merely acts as a screening or certification mechanism. To test this conjecture, we examine that stock return reaction for the seven-day period centered around the announcement that the IR firm was hired for those firms publicly announcing the hiring. There are no significant returns for either the test or control companies listed on the NASDAQ and NYSE/AMEX. The test companies on the OTHER OTC experience a mean return of 7.3% during the week, which is significantly greater than zero and

the control sample return (-0.1%). However, the median return for the test companies on the OTHER OTC is 0.0% and follow-up analysis finds that the positive mean return is driven only by companies that provided other announcements during the period. This finding is consistent with the strategies IR firms employ to "wake up" the markets quickly and suggests that IR actions, rather than the mere announcement that an IR firm has been hired, are driving the observed returns.[27]

7. Conclusions

This paper provides one of the first extensive investigations of the process and consequences of investor relations (IR) activities geared toward attracting increased following from investors and information intermediaries. Through interviews and surveys with IR professionals, we learn that (1) the IR process focuses on management access and company visibility as key drivers of the strategy's success, (2) disclosure practices are not primary focus of IR and whether they are changed is highly conditional on the context, (3) the IR strategy often must progress in stages, with visibility and increased trading by the existing investor base preceding increases in following by institutions and analysts, and (4) the course of the IR strategy depends on prior visibility and can be limited in its success for small companies on less liquid exchanges.

Our empirical tests examine a sample of 184 companies that hired IR firms to develop an investor relations strategy. We find that these companies have significant increases in their disclosure, press coverage, trading activity, institutional investor ownership, analyst following,

[27] Given the lead time required in hiring an IR firm, it is unlikely that some new event happened and the company hired an IR firm within the same week. Rather, it is likely that the hired IR firm suggested making the other releases during the week. Typical examples of the other announcements include new customers, new products, and milestones toward regulatory approval.

and market valuation after hiring the IR firm, both in absolute terms and relative to a control sample matched on exchange, industry, time listed, and prior investor following. Increases in the "investment viability attributes" of disclosure, press coverage, and trading activity are observed immediately; increases in institutional ownership and analyst following typically do not follow until two quarters later. Additionally, we provide evidence that early increases in the viability attributes are related to subsequent increases in following by analysts and institutions. Finally, we document a decrease in the book-to-price ratio at the end of the first year after hiring an IR firm. This impact occurs mainly in companies that increased their investment viability and/or their institutional investor or analyst following during the year.

We also find that the magnitude of our results is conditional on exchange listing. NASDAQ companies experience bigger increases in institutional investor and analyst following, whereas companies on the OTC Bulletin Board and Pink Sheets experience greater increases in trading activity and disclosure. Overall, these results suggest that IR activities play a significant role in helping small and mid-cap companies overcome their low visibility due to their firm characteristics and attract a wider following by investors and information intermediaries.

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EXHBIT
Web-Based IR Survey

Please rate the <u>importance</u> of each of the following in developing an effective investor relations strategy for a small or mid-cap company:

	Not at all Important		Somewhat Important		Quite Important		Extremely Important
	1	2	3	4	5	6	7
Identifying investors that are potentially interested in investing in companies with the attributes of the client company (e.g., based on trades in similar companies or stated investment patterns).							
Conducting surveys of investors and analysts to determine the current perceptions regarding the company.							
Reevaluating, repositioning or changing the company name and/or corporate branding strategy.							

	Not at all Important		Somewhat Important		Quite Important		Extremely Important
	1	2	3	4	5	6	7
Increasing the general awareness of the company by...							
...Buy-side investors							
...Retail investors							
...Sell-side analysts							
Presentations made by representatives of the Public Relations firm to...							
...Buy-side investors							
...Retail investors							
...Sell-side analysts							
Arranging for members of the company to meet with or present to...							
...Buy-side investors							
...Retail investors							
...Sell-side analysts							

	Not at all Important		Somewhat Important		Quite Important		Extremely Important
Managing relations with the financial press by...	1	2	3	4	5	6	7
...increasing the financial press' general awareness of the company.							

	Not at all Important		Somewhat Important		Quite Important		Extremely Important
Managing relations with the financial press by...	1	2	3	4	5	6	7
...increasing coverage of standard press releases (e.g., earnings announcements, employee promotions).							
...arranging financial press access to top management (in-depth interviews, comments on company performance).							
...positioning top management to act as business experts in press articles on general industry or business issues.							
...arranging general articles covering the company and its products.							

	Not at all Important		Somewhat Important		Quite Important		Extremely Important
	1	2	3	4	5	6	7
Reconfigure/reformat current disclosures without adding new information in...							
Earnings announcements							
Annual report							
General press releases							
Company web site							
Increase quantity of information disclosed in...							
Earnings announcements							
Annual report							
General press releases							
Company web site							
Increase quality of information disclosed in...							
Earnings announcements							
Annual report							
General press releases							
Company web site							
Increase timeliness of providing financial disclosures (e.g., earlier release dates, more frequent updating) in...							
Earnings announcements							
Annual report							
General press releases							
Company web site							

TABLE 1
Survey of IR Process

Instructions to respondents: Please rate the importance of each of the following in developing an effective investor relations strategy for small and mid-cap companies:

	Mean	Median
Identifying potential investors	6.1	6
Surveying the market perceptions of company	5.8	6
Changing company name or branding strategy	4.2	4

	Buy-side		Retail investors		Sell-side	
	Mean	Median	Mean	Median	Mean	Median
Increasing general awareness of company by…	6.9	7	4.1	4	5.3	6
Presentations by members of IR firm to…	2.5	1	1.6	1	2.0	1
Arranging company meetings/presentations with…	7.0	7	4.4	4	6.0	6

	Mean	Median
Managing relations with financial press by…		
…increasing press' general awareness of company	6.0	6
…increasing coverage of standard press releases	4.6	5
…arranging press access to top management	5.6	6
…positioning top management as business experts	5.2	5
…arranging general articles on company and products	5.5	5

	Earnings Announcements		Annual Report		General Press Releases		Company Web Site	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Reformat current disclosures without adding info in…	5.0	5.5	4.4	5	4.8	5	4.8	6
Increase quantity of information disclosed in…	5.4	5	4.7	4.5	5.2	5	5.1	4.5
Increase quality of information disclosed in…	6.6	7	5.7	6.5	6.2	7	5.6	5.5
Increase timeliness of disclosures in…	5.5	5.5	4.7	5	5.1	5	5.3	5.5

This table presents the results of a survey of 11 IR professionals. After interviewing the IR professionals, they were sent an e-mail with a link to a web-based survey. They were asked to rate the importance of each item above on a seven-point scale. Please see the Exhibit for the full survey. All professionals answered the survey. Mean and medians are presented in the table. We do not provide statistical tests as the purpose of this survey is merely to summarize the interviewees' views, not to test hypotheses.

TABLE 2
Sample Composition

Panel A: Sources of sample companies

Data source	N
PR Newswire's Agency Roster	122
Factiva search	17
IR firm's website	13
List provided by IR firm	32
	184

Panel B: Sample companies by year

Year IR firm hired	N	Pct.
1999	34	18.5%
2000	27	14.7%
2001	40	21.7%
2002	30	16.3%
2003	29	15.8%
2004	24	13.0%
	184	

Panel C: Sample companies by exchange listing

Exchange	N	Pct.
NYSE	16	8.7%
AMEX	15	8.2%
NASDAQ	78	42.4%
OTC Bulletin Board	64	34.8%
Pink Sheets	11	6.0%
	184	

This table provides details on the composition of our sample of companies that hired IR firms. Panel A lists the source where each sample company was found. First, PR Newswire's Agency Roster is weekly summary of "account wins" by PR and IR firms during the prior week. From this roster, we select only those new accounts that explicitly state that the IR firm was hired for investor or media relations. Second, using the list of IR firms announcing clients on the Agency Roster and a list of IR firms obtained from the National Investor Relations Institute, we searched Factiva for any additional press releases announcing new clients that were not picked up by the Agency Roster. Third, we went to the websites of those IR firms to check whether they posted a client list with the dates each client signed with the IR firm. Finally, we contacted all of the IR firms on the NIRI list of firms to ask whether they had any additional clients not found in any of these other sources. Panel B presents the composition of the sample by year using the date when the IR firm was hired. Panel C present the composition of the sample by exchange listing at the time the company hired the IR firm.

TABLE 3
Descriptive Statistics

Panel A: Firm characteristics of test and control samples prior to IRDATE

	Mean			Median			
Variable	Test	Control	P(Diff.)	Test	Control	P(Diff.)	N
MVAL	768.634	872.898	(0.783)	56.783	63.806	(0.200)	105
LMVAL	4.239	4.562	(0.246)	4.039	4.156	(0.200)	105
TA	572.045	698.298	(0.553)	67.798	104.508	(0.247)	109
LTA	4.478	4.781	(0.270)	4.217	4.649	(0.247)	109
SALES	374.952	428.555	(0.686)	54.442	79.476	(0.786)	109
LSALES	4.116	4.210	(0.747)	3.997	4.375	(0.786)	109
SP500	0.174	0.147	(0.582)	0.000	0.000	(0.582)	109
EP	-0.211	-0.272	(0.676)	0.017	0.005	(0.991)	105
LEV	0.287	0.260	(0.624)	0.196	0.177	(0.943)	109
NOWN	5.231	6.734	(0.568)	1.037	1.003	(0.858)	92
LNOWN	0.085	0.050	(0.896)	0.035	0.002	(0.858)	92
CLMV	-0.085	-0.080	(0.970)	-0.065	0.011	(0.808)	78
CLTA	0.104	0.193	(0.322)	0.019	0.043	(0.334)	90
CLSALES	0.414	0.372	(0.816)	0.057	0.086	(0.220)	90
CEPS	0.180	0.115	(0.579)	0.004	0.004	(0.706)	78
CLEV	0.011	0.024	(0.675)	-0.001	0.000	(0.338)	90
CLNOWN	0.149	0.099	(0.713)	-0.022	-0.017	(0.729)	66
CSHRS	0.138	0.061	(0.186)	0.014	0.006	(0.147)	88

Panel B: Test variables for test and control samples prior to IRDATE

		Mean			Median			
Variable	Exchange	Test	Control	P(Diff.)	Test	Control	P(Diff.)	N
NPRW	ALL	6.350	6.174	(0.879)	4.000	3.000	(0.096)	160
	NYSE/AMEX	7.963	11.893	(0.330)	7.000	5.000	(0.271)	27
	NASDAQ	7.314	7.514	(0.917)	5.000	5.000	(0.430)	70
	OTHER OTC	4.587	2.143	(0.005)	2.000	1.000	(0.004)	63
NEDS	ALL	16.288	18.484	(0.580)	8.000	6.000	(0.805)	160
	NYSE/AMEX	39.000	48.536	(0.591)	25.000	16.500	(0.966)	27
	NASDAQ	16.657	19.414	(0.568)	9.000	10.000	(0.362)	70
	OTHER OTC	6.143	4.095	(0.122)	2.000	2.000	(0.120)	63

TABLE 3 (continued)
Descriptive Statistics

Panel B: Test variables for test and control samples prior to IRDATE (Continued)

		Mean			Median			
Variable	Exchange	Test	Control	P(Diff.)	Test	Control	P(Diff.)	N
LVOL	ALL	6.352	5.573	(0.005)	6.497	5.490	(0.003)	147
	NYSE/AMEX	7.278	6.848	(0.447)	7.359	7.109	(0.508)	29
	NASDAQ	6.544	6.162	(0.320)	6.640	6.191	(0.360)	59
	OTHER OTC	5.705	4.356	(0.003)	5.893	4.515	(0.003)	59
PDAYS	ALL	0.867	0.748	(0.000)	1.000	0.923	(0.000)	147
	NYSE/AMEX	0.937	0.935	(0.973)	1.000	1.000	(0.369)	29
	NASDAQ	0.937	0.906	(0.321)	1.000	1.000	(0.410)	59
	OTHER OTC	0.764	0.497	(0.000)	0.891	0.402	(0.000)	59
NIH	ALL	29.153	30.135	(0.893)	5.000	4.000	(0.872)	163
	NYSE/AMEX	82.207	80.448	(0.950)	24.000	15.000	(0.895)	29
	NASDAQ	31.730	34.541	(0.770)	13.000	12.000	(0.945)	74
	OTHER OTC	0.333	0.383	(0.754)	0.000	0.000	(0.543)	60
PIH	ALL	0.170	0.177	(0.798)	0.034	0.042	(0.918)	162
	NYSE/AMEX	0.357	0.351	(0.941)	0.437	0.296	(0.864)	29
	NASDAQ	0.234	0.251	(0.686)	0.156	0.151	(0.934)	73
	OTHER OTC	0.002	0.003	(0.412)	0.000	0.000	(0.632)	60
NAL	ALL	1.772	2.012	(0.581)	0.000	0.000	(0.319)	167
	NYSE/AMEX	4.500	5.000	(0.754)	3.000	1.500	(0.774)	30
	NASDAQ	2.192	2.521	(0.600)	1.000	1.000	(0.100)	73
	OTHER OTC	0.016	0.031	(0.563)	0.000	0.000	(0.567)	64
BP	ALL	0.859	0.804	(0.675)	0.516	0.505	(0.895)	132
	NYSE/AMEX	0.737	0.780	(0.785)	0.571	0.624	(0.994)	30
	NASDAQ	0.976	0.813	(0.374)	0.589	0.510	(0.453)	73
	OTHER OTC	0.680	0.802	(0.723)	0.203	0.489	(0.137)	28

This table provides means and medians for firm characteristics in the fiscal year prior to the companies hiring the IR firm (Panel A) and for the test variables in the quarter prior to the companies hiring the IR firm (Panel B). The Test column refers to the sample of companies hiring the IR firm. The Control column refers to the control sample matched on exchange listing, industry, time listed, and prior institutional investor following. P(Diff) is the two-tailed *p*-value for tests of differences in the mean and median between samples. In Panel A, *MVAL* is the market value of equity, *TA* is total assets, *SALES* is total sales, *SP500* is an indicator variable equal to one if the company is listed on the S&P 500, *EP* is the earnings-price ratio, *LEV* is the debt-to-assets ratio, *NOWN* is the number of owners of record (in thousands). An "*L*" prior to a variable indicates the log form and a "*C*" indicates a one-year change. *CEPS* is the change in EPS divided by price and *CSHRS* is the change in shares outstanding. In Panel B, *NPRW* (*NEDS*) is the number of articles mentioning the company in press releases (edited sources), *LVOL* is the log of monthly share volume, *PDAYS* is the percent of days traded in a month, *NIH* (*PIH*) is the number (percent) of institutional owners, *NAL* is the number of analysts issuing earnings forecasts, and *BP* is the book-value-to-price ratio. Companies with negative BP ratios are deleted from the sample. The OTHER OTC exchanges are the OTC Bulletin Board and the Pink Sheets.

TABLE 4
Changes in Disclosure and Press Coverage around Hiring of IR Firm

Panel A: Log of Number of Disclosures in Press Release Wires

		Mean Change in *LNPRW*			Median Change in *LNPRW*			Pct. Positive Changes			
Exchange	QTR	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	0	0.206**	0.089		0.203**	0.000		55.7%	46.2%	†	127
	1	0.369***	0.100	††	0.405***	0.000	††	63.1%	47.4%	††	123
	2	0.331***	0.015	†††	0.138***	0.000	†††	51.3%	36.1%	†††	154
	3	0.135*	-0.029	†	0.000*	0.000	†	47.9%	34.1%	†††	146
	4	0.191**	0.069		0.112**	0.000		52.9%	42.6%	†	122
NYSE/AMEX	0	0.025	0.296*		0.000	0.154*		45.8%	68.0%	†	26
	1	0.252*	0.457**		0.034*	0.405***		52.2%	61.9%		25
	2	0.173	0.186		0.154*	0.005		55.6%	50.0%		27
	3	-0.042	0.348**	†	0.000	0.167**	†	40.7%	58.3%		27
	4	-0.001	0.098		0.170	0.000		58.3%	47.4%		25
NASDAQ	0	0.176**	0.105		0.223**	0.000		58.5%	47.5%		64
	1	0.360***	0.050	††	0.405***	0.000	†	67.9%	46.7%	††	63
	2	0.137	-0.084	†	0.000	0.000	†	44.9%	38.6%		69
	3	0.018	-0.303**	††	0.000	-0.387**	††	47.8%	31.8%	††	67
	4	0.200*	0.026		0.087	0.000		52.2%	41.5%		56
OTHER OTC	0	0.410*	-0.217	††	0.693*	0.000	††	58.6%	15.0%	†††	37
	1	0.486**	-0.183	††	0.693**	0.000	††	63.0%	31.3%	††	35
	2	0.636***	0.073	†††	0.405***	0.000	†††	56.9%	26.0%	†††	58
	3	0.377***	0.159**	†	0.288***	0.000**	†	51.9%	25.0%	†††	52
	4	0.323*	0.151		0.091*	0.000		50.0%	40.9%		41

*, **, *** Significantly different from zero at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test for predicted changes; two-tailed otherwise.
†, ††, ††† Test sample significantly greater than control sample at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test.

TABLE 4 (continued)

Changes in Disclosure and Press Coverage around Hiring of IR Firm

Panel B: Log of Number of Articles in Edited Sources

		Mean Change in *LNEDS*			Median Change in *LNEDS*			Pct. Positive Changes			
Exchange	QTR	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	0	0.053	0.123		0.000	0.000		44.1%	48.1%		127
	1	0.139*	0.114		0.000*	0.081		48.0%	52.4%		123
	2	0.251***	-0.073	†††	0.078***	0.000	†††	51.9%	36.8%	†††	154
	3	0.091	-0.033		0.000	0.000		45.9%	43.5%		146
	4	0.086	-0.118	†	0.000	-0.019		48.4%	42.5%		122
NYSE/AMEX	0	0.042	0.129		-0.076	0.015		42.3%	50.0%		26
	1	-0.055	0.049		-0.057	0.182		40.0%	58.3%		25
	2	0.145	-0.075		0.027	-0.250	†	51.9%	37.5%		27
	3	-0.234*	-0.330*		0.000*	-0.290		48.1%	37.5%		27
	4	-0.049	-0.462**	†	0.000	-0.288**	†	48.0%	30.4%		25
NASDAQ	0	-0.092	0.089		-0.059	-0.057		40.6%	45.1%		64
	1	0.055	0.089		0.000	0.044		46.0%	51.4%		63
	2	0.093	-0.194	††	0.000	-0.161*	††	47.8%	35.7%	†	69
	3	0.016	-0.135		0.000	0.000		41.8%	47.0%		67
	4	0.036	-0.161		0.059	-0.080		50.0%	42.6%		56
OTHER OTC	0	0.313*	0.187		0.251**	0.214		51.4%	52.9%		37
	1	0.428**	0.226		0.539**	0.112		57.1%	50.0%		35
	2	0.489***	0.098	††	0.450***	0.000		56.9%	38.0%	†††	58
	3	0.356**	0.256**		0.243***	0.000**		50.0%	41.7%		52
	4	0.235	0.247		0.000	0.288		46.3%	51.7%		41

*, **, *** Significantly different from zero at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test for predicted changes; two-tailed otherwise.
†, ††, ††† Test sample significantly greater than control sample at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test.

The table reports mean and median changes, and well as the percent of positive changes, for disclosure and press coverage. The Test column refers to the sample of companies hiring the IR firm. The Control column refers to the control sample matched on exchange listing, industry, time listed, and prior institutional investor following. We predict increases in all variables for the test sample and a greater increase in the test sample vs. the control sample. In Panel A, *LNPRW* is the log of the number of articles in press release wires. In Panel B, *LNEDS* is the log of the number of articles in edited sources ("All Sources Not Press Release Wires" on Factiva). Quarter 0 refers to the quarter prior to the date the IR firm is hired, quarter 1 is the quarter subsequent (including the *IRDATE*), and so forth to quarter 4. The quarterly change is computed as the value the variable in the quarter minus the value in the same quarter one year earlier. For each change, we require that the test company and its matched control company both have nonmissing data. We also require that both companies be listed for the full quarter to avoid situations where IPOs or delistings create unusual press coverage. N is the number of observations. The OTHER OTC exchanges are the OTC Bulletin Board and the Pink Sheets.

TABLE 5
Changes in Trading Activity around Hiring of IR Firm

Panel A: Log of Share Volume (LVOL)

		Mean Change in *LVOL*			Median Change in *LVOL*			Pct. Positive Changes			
Exchange	QTR	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	0	0.250**	-0.101	††	0.129**	0.047	†	59.2%	53.6%		125
	1	0.384***	-0.172	†††	0.096***	-0.080	†††	55.0%	43.5%	††	131
	2	0.330***	-0.070	†††	0.095**	-0.108	†††	51.2%	40.0%	††	125
	3	0.363***	0.001	††	0.036**	-0.007	†	51.6%	45.1%		122
	4	0.429***	0.169	†	0.034**	-0.099	††	54.5%	43.1%	††	123
NYSE/AMEX	0	0.399***	-0.031	††	0.334***	0.026	††	67.9%	53.6%		28
	1	0.178	0.041		0.006	0.015		51.7%	51.7%		29
	2	-0.030	-0.034		-0.170	-0.037		35.7%	32.1%		28
	3	-0.070	0.146		0.049	0.117		56.0%	60.0%		25
	4	-0.011	0.132		0.000	0.000		45.8%	45.8%		24
NASDAQ	0	-0.075	-0.150		0.004	0.047		51.9%	51.9%		52
	1	0.099	-0.142	†	0.090	-0.254	†	51.8%	37.5%	†	56
	2	0.206*	-0.041		0.010	-0.156	†	50.9%	40.4%		57
	3	0.228*	-0.016		-0.077	-0.088		45.6%	38.6%		57
	4	0.210	0.068		0.001	-0.215		50.9%	36.8%	†	57
OTHER OTC	0	0.531**	-0.086	††	0.513**	0.137	†	62.2%	55.6%		45
	1	0.860***	-0.342	†††	0.373***	-0.271	†††	60.9%	45.7%	†	46
	2	0.759***	-0.136	†††	0.298***	-0.272	†††	62.5%	45.0%	†	40
	3	0.827***	-0.066	††	0.523***	-0.075	†	57.5%	45.0%		40
	4	0.978***	0.326	†	0.520***	-0.037	††	64.3%	50.0%	†	42

*, **, *** Significantly different from zero at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test for predicted changes; two-tailed otherwise.
†, ††, ††† Test sample significantly greater than control sample at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test.

TABLE 5 (continued)
Changes in Trading Activity around Hiring of IR Firm

Panel B: Percent of Days Traded (PDAYS)

		Mean Change in *PDAYS*			Median Change in *PDAYS*			Pct. Positive Changes			
Exchange	QTR	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	0	0.020*	-0.024	††	0.000*	0.000	††	28.0%	27.2%		125
	1	0.034***	-0.036**	†††	0.000***	0.000*	†††	31.3%	29.0%		131
	2	0.020*	-0.019	††	0.000*	0.000	††	26.2%	23.8%		122
	3	0.021*	-0.004		0.000	0.000	†	28.9%	25.6%		121
	4	0.049***	0.003	††	0.000**	0.000	†	32.8%	27.9%		122
NYSE/AMEX	0	0.002	0.000		0.000	0.000		14.3%	14.3%		28
	1	0.030**	0.003		0.000**	0.000		17.2%	17.2%		29
	2	0.053*	-0.009	††	0.000	0.000		15.4%	19.2%		26
	3	-0.016	-0.017		0.000	0.000		12.5%	12.5%		24
	4	-0.005	-0.014		0.000	0.000		16.7%	16.7%		24
NASDAQ	0	0.000	-0.002		0.000	0.000		21.2%	23.1%		52
	1	0.006	-0.013		0.000	0.000	†	30.4%	23.2%		56
	2	0.007	-0.020	†	0.000	0.000	†	21.1%	14.0%		57
	3	0.011	0.008		0.000	0.000		22.8%	21.1%		57
	4	0.028*	0.015		0.000	0.000		28.6%	25.0%		56
OTHER OTC	0	0.055**	-0.065*	†††	0.000**	-0.029	††	44.4%	40.0%		45
	1	0.071**	-0.088**	†††	0.000**	-0.002*	††	41.3%	43.5%		46
	2	0.016	-0.025		0.000	-0.032		41.0%	41.0%		39
	3	0.057**	-0.015	†	0.000*	-0.001	†	47.5%	40.0%		40
	4	0.106***	-0.003	††	0.000**	-0.019	††	47.6%	38.1%		42

*, **, *** Significantly different from zero at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test for predicted changes; two-tailed otherwise.
†, ††, ††† Test sample significantly greater than control sample at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test.

The table reports mean and median changes, and well as the percent of positive changes, for trading activity variables. The Test column refers to the sample of companies hiring the IR firm. The Control column refers to the control sample matched on exchange listing, industry, time listed, and prior institutional investor following. We predict increases in all variables for the test sample and a greater increase in the test sample vs. the control sample. In Panel A, *LVOL* is the log of monthly share volume. In Panel B, *PDAYS* is the percent of days traded in a month. Quarter 0 refers to the three months prior to the date the IR firm is hired, quarter 1 is the three months subsequent (including the month of the hiring), and so forth to quarter 4. The quarterly change is computed as the average of the variable in the quarter minus the average in the same quarter one year earlier. For each change, we require that the test company and its matched control company both have nonmissing data. N is the number of observations. The OTHER OTC exchanges are the OTC Bulletin Board and the Pink Sheets.

TABLE 6
Changes in Institutional Investor Following around Hiring of IR Firm

Panel A: Log of Number of Institutional Investors (LNIH)

		Mean Change in *LNIH*			Median Change in *LNIH*			Pct. Positive Changes			
Exchange	QTR	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	0	0.026	0.000		0.000	0.000		35.7%	29.6%		154
	1	0.018	-0.024		0.000	0.000		35.4%	32.9%		147
	2	0.046*	-0.043	††	0.000*	0.000	††	38.6%	31.0%	†	140
	3	0.059**	-0.062**	†††	0.000*	0.000**	†††	38.3%	25.7%	††	133
	4	0.068**	-0.042	†††	0.000**	0.000	††	41.7%	30.8%	††	127
NYSE/AMEX	0	0.030	0.031		0.000	0.000		40.7%	36.0%		27
	1	0.001	0.003		-0.039	0.000		37.0%	48.0%		27
	2	0.011	-0.011		0.000	0.000		38.5%	48.0%		26
	3	-0.005	-0.015		0.021	0.000		50.0%	33.3%		24
	4	-0.015	-0.011		0.023	0.010		54.2%	50.0%		24
NASDAQ	0	0.048	0.004		0.037	0.000		52.9%	46.5%		70
	1	0.029	0.002		0.054	0.011		50.7%	50.0%		67
	2	0.075*	-0.031	†	0.057*	0.000	†	55.6%	46.3%		63
	3	0.066	-0.102*	††	0.000	-0.117*	††	48.4%	39.1%		62
	4	0.097**	-0.083*	†††	0.081**	-0.053*	†††	53.3%	37.1%	††	60
OTHER OTC	0	-0.003	-0.019		0.000	0.000		12.3%	5.4%	†	57
	1	0.015	-0.073**	†	0.000	0.000**	†	15.1%	2.0%	†††	53
	2	0.028	-0.075**	†	0.000	0.000*	††	17.6%	2.0%	†††	51
	3	0.083*	-0.031	††	0.000	0.000	††	19.1%	4.2%	††	47
	4	0.074*	0.000		0.000*	0.000		18.6%	11.4%		43

*, **, *** Significantly different from zero at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test for predicted changes; two-tailed otherwise.
†, ††, ††† Test sample significantly greater than control sample at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test.

TABLE 6 (continued)
Changes in Institutional Investor Following around Hiring of IR Firm

Panel B: Percentage of Institutional Ownership (PIH)

		Mean Change in *PIH*			Median Change in *PIH*			Pct. Positive Changes			
Exchange	QTR	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	0	0.012**	0.003		0.000	0.000		36.6%	35.9%		142
	1	0.009*	-0.001		0.000	0.000		38.0%	35.0%		137
	2	0.017***	-0.006	†††	0.000**	0.000	†††	44.4%	33.3%	††	135
	3	0.018***	-0.004	†††	0.000**	0.000	††	46.5%	35.7%	††	129
	4	0.016**	0.003	†	0.000*	0.000		40.3%	33.9%		124
NYSE/AMEX	0	0.001	-0.002		0.000	-0.002		44.0%	40.0%		25
	1	0.005	0.002		0.000	0.000		48.0%	48.0%		25
	2	0.018	-0.010		0.015	-0.002	†	64.0%	44.0%	†	25
	3	0.012	-0.003		0.002	-0.001		50.0%	45.8%		24
	4	0.008	-0.001		-0.005	0.000		41.7%	45.8%		24
NASDAQ	0	0.025**	0.007		0.000*	0.000		50.0%	52.9%		68
	1	0.016*	-0.001		0.000	0.000		47.0%	50.0%		66
	2	0.030**	-0.007	†††	0.003**	-0.001	††	55.6%	47.6%		63
	3	0.034***	-0.006	†††	0.006**	0.000	††	59.0%	49.2%		61
	4	0.030**	0.007		0.004*	-0.001		53.3%	40.0%	†	60
OTHER OTC	0	-0.001	0.001		0.000	0.000		14.3%	10.2%		49
	1	-0.001	-0.002		0.000	0.000*		19.6%	6.5%	††	46
	2	-0.001	-0.002		0.000	0.000		19.1%	8.5%	†	47
	3	0.000	-0.002		0.000*	0.000	†	27.3%	11.4%	††	44
	4	0.001**	-0.001		0.000**	0.000		20.0%	17.5%		40

*, **, *** Significantly different from zero at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test for predicted changes; two-tailed otherwise.
†, ††, ††† Test sample significantly greater than control sample at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test.

The table reports mean and median changes, and well as the percent of positive changes, for institutional investor following. The Test column refers to the sample of companies hiring the IR firm. The Control column refers to the control sample matched on exchange listing, industry, time listed, and prior institutional investor following. We predict increases in all variables for the test sample and a greater increase in the test sample vs. the control sample. In Panel A, *LNIH* is the log of the number of institutional owners. In Panel B, *PIH* is the percentage of institutional ownership. Quarter 0 refers to the calendar quarter during which the IR firm is hired, quarter 1 is the next calendar quarter, and so forth to quarter 4. The quarterly change is computed as the value of the variable in the quarter minus the value in the same quarter one year earlier. For each change, we require that the test company and its matched control company both have nonmissing data. N is the number of observations. The OTHER OTC exchanges are the OTC Bulletin Board and the Pink Sheets.

TABLE 7
Changes in Analyst Following around Hiring of IR Firm

		Mean Change in *LNAL*			Median Change in *LNAL*			Pct. Positive Changes			
Exchange	QTR	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	0	-0.023	-0.021		0.000	0.000		16.3%	13.0%		166
	1	0.006	-0.026		0.000	0.000		18.4%	14.5%		158
	2	0.038*	-0.013	†	0.000*	0.000	†	22.0%	16.4%		150
	3	0.037*	-0.039	††	0.000*	0.000	††	21.5%	16.2%		144
	4	0.060**	-0.036	†††	0.000**	0.000	††	23.2%	18.1%		138
NYSE/AMEX	0	-0.002	-0.033		0.000	0.000		29.0%	13.8%	†	31
	1	0.035	-0.047		0.000	0.000		32.1%	15.4%	†	28
	2	-0.005	-0.033		0.000	0.000		25.9%	23.1%		27
	3	-0.061	-0.074		0.000	0.000		26.9%	23.1%		26
	4	-0.027	-0.068		0.000	0.000		26.9%	23.1%		26
NASDAQ	0	-0.032	-0.034		0.000	0.000		24.7%	23.6%		73
	1	0.020	-0.028		0.000	0.000		28.2%	25.0%		71
	2	0.105**	-0.007	†	0.000**	0.000	††	37.7%	26.4%	†	69
	3	0.102**	-0.045	††	0.000**	0.000	††	33.8%	25.7%		68
	4	0.133***	-0.051	†††	0.000***	0.000	††	36.9%	28.4%		65
OTHER OTC	0	-0.022	0.000		0.000	0.000		0.0%	0.0%		62
	1	-0.023	-0.013		0.000	0.000		0.0%	0.0%		59
	2	-0.026	-0.013		0.000	0.000		0.0%	0.0%		54
	3	0.000	-0.013		0.000	0.000		2.0%	0.0%		50
	4	0.007	0.000		0.000	0.000		2.1%	2.0%		47

*, **, *** Significantly different from zero at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test for predicted changes; two-tailed otherwise.
†, ††, ††† Test sample significantly greater than control sample at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test.

The table reports mean and median changes, and well as the percent of positive changes, for analyst following. The Test column refers to the sample of companies hiring the IR firm. The Control column refers to the control sample matched on exchange listing, industry, time listed, and prior institutional investor following. We predict increases in all variables for the test sample and a greater increase in the test sample vs. the control sample. *NAL* is the number of unique analysts issuing earnings forecasts during the quarter. Quarter 0 refers to the calendar quarter during which the IR firm is hired, quarter 1 is the next calendar quarter, and so forth to quarter 4. The quarterly change is computed as the value of the variable in the quarter minus the value in the same quarter one year earlier. For each change, we require that the test company and its matched control company both have nonmissing data. N is the number of observations. The OTHER OTC exchanges are the OTC Bulletin Board and the Pink Sheets.

TABLE 8

Changes in Institutional Investor and Analyst Following Subsequent to Changes in Disclosure, Press Coverage, and Trading Activity

Panel A: Log of Number of Institutional Investors (LNIH)

	Initial Change in	Mean Subseq. Change in *LNIH*			Median Subseq. Change in *LNIH*			Pct. Positive Subseq. Changes			
Exchange	Invest. Viability	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	Decrease	0.038	0.035		0.000	0.000		45.5%	47.1%		33
	Increase	0.099**	-0.027	††	0.000**	0.000	††	43.9%	30.1%	††	93
NYSE/AMEX	Decrease	-0.166	0.085	††	0.014	0.097	†	50.0%	70.0%		10
	Increase	0.052	-0.055		0.099	0.011		71.4%	50.0%		16
NASDAQ	Decrease	0.117	-0.089		0.143	0.000		69.2%	40.0%	†	13
	Increase	0.157**	-0.049	††	0.071**	0.000	††	55.6%	37.8%	††	50
OTHER OTC	Decrease	0.139	0.186		0.000	0.000		10.0%	33.3%		10
	Increase	0.013	0.029		0.000	0.000		4.3%	4.2%		27

Panel B: Log of Number of Analysts (LNAL)

	Initial Change in	Mean Subseq. Change in *LNAL*			Median Subseq. Change in *LNAL*			Pct. Positive Subseq. Changes			
Exchange	Invest. Viability	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	Decrease	-0.084**	-0.058		0.000**	0.000		6.1%	14.7%		33
	Increase	0.092***	0.005	††	0.000***	0.000		25.8%	21.9%		93
NYSE/AMEX	Decrease	-0.264**	-0.089	†	-0.144**	0.000	†	0.0%	20.0%	†	10
	Increase	0.076	0.014		0.000*	0.000		43.8%	31.3%		16
NASDAQ	Decrease	-0.009	-0.074		0.000	0.000		15.4%	20.0%		13
	Increase	0.125***	-0.009	††	0.000**	0.000		32.0%	30.0%		50
OTHER OTC	Decrease	0.000	0.000		0.000	0.000		0.0%	0.0%		10
	Increase	0.041	0.023		0.000	0.000		3.7%	3.3%		27

*, **, *** Significantly different from zero at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test for predicted changes; two-tailed otherwise.
†, ††, ††† Test sample significantly greater than control sample at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test.

The table reports subsequent changes in the log of the number of institutional investors (*LNIH*) and log of number of analysts (*LNAL*). These changes are computed as the difference between quarter 4 and quarter 2 after the *IRDATE*. The sample is partitioned by initial changes in investment viability. The increase row contains firms for which press releases, press coverage, or trading activity increased in quarters 1 and 2 (relative to the prior year); all other firms are in the decrease row. The Test (Control) column refers to the sample of companies hiring the IR firm (matched control sample). We predict increases in all variables for the test sample and a greater increase in the test sample vs. the control sample. For each change, we require that the test company and its matched control company both have nonmissing data. N is the number of observations. The OTHER OTC exchanges are the OTC Bulletin Board and the Pink Sheets.

TABLE 9
Changes in Book-to-Price Ratio around Hiring of IR Firm

Panel A: Change in Book-to-Price Ratio (BP)

	Mean Change in *BP*			Median Change in *BP*			Pct. *Negative* Changes			
Exchange	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	-0.197**	0.072	††	-0.020*	0.014	††	54.1%	46.4%		109
NYSE/AMEX	0.138	0.047		0.031	0.011		45.8%	47.8%		24
NASDAQ	-0.232**	0.064	†	-0.038	0.035	††	56.9%	44.1%	†	65
OTHER OTC	-0.483*	0.129	††	-0.039**	-0.014	†	55.0%	52.6%		20

Panel B: Change in Book-to-Price Ratio (BP) Conditioned on Changes in Investment Viability Attributes

	Change in	Mean Change in *BP*			Median Change in *BP*			Pct. *Negative* Changes			
Exchange	Invest. Viability	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	Decrease	-0.347	0.352*	††	-0.010	0.032		53.6%	40.7%		28
	Increase	-0.154*	0.011		-0.029*	0.001	††	55.1%	49.4%		78
NYSE/AMEX	Decrease	0.341*	-0.035	†	0.078	-0.047		42.9%	71.4%		7
	Increase	0.055	0.083		0.031	0.033		47.1%	37.5%		17
NASDAQ	Decrease	-0.299	0.638*	††	-0.010	0.429*	†	53.3%	25.0%	†	15
	Increase	-0.228*	-0.071		-0.054*	-0.018	†	60.4%	52.1%		48
OTHER OTC	Decrease	-1.268	-0.116		-0.474	0.053		66.7%	50.0%		6
	Increase	-0.152*	0.195	††	0.000	-0.014		46.2%	53.3%		13

TABLE 9 (Continued)
Changes in Book-to-Price Ratio around Hiring of IR Firm

Panel C: Change in Book-to-Price Ratio (BP) Conditioned on Changes in Following

	Change in	Mean Change in *BP*			Median Change in *BP*			Pct. *Negative* Changes			
Exchange	Following	Test	Control	Diff.	Test	Control	Diff.	Test	Control	Diff.	N
ALL	Decrease	-0.067	0.053		-0.128	0.001	††	62.9%	48.7%		35
	Increase	-0.185*	0.147	††	0.003	0.032*	†	50.0%	42.6%		64
NYSE/AMEX	Decrease	0.214	0.107		0.095	-0.033		50.0%	62.5%		8
	Increase	0.138*	0.015		0.032	0.011		40.0%	40.0%		15
NASDAQ	Decrease	-0.001	0.035		-0.113	0.296		64.3%	31.3%	††	14
	Increase	-0.308**	0.196	††	-0.024	0.035*	††	54.3%	45.5%		46
OTHER OTC	Decrease	-0.312**	0.044	††	-0.174**	-0.027	†	69.2%	60.0%		13
	Increase	0.083	0.070		0.039	0.070		33.3%	0.0%		3

*, **, *** Significantly different from zero at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test for predicted changes; two-tailed otherwise.
†, ††, ††† Test sample significantly greater than control sample at the 0.10, 0.05, and 0.01 level, respectively, using a one-tailed test.

The table reports mean and median changes, and well as the percent of *negative* changes, for the book-to-price ratio (BP). The Test column refers to the sample of companies hiring the IR firm. The Control column refers to the control sample matched on exchange listing, industry, time listed, and prior institutional investor following. We predict *decreases* in all variables for the test sample and a greater *decrease* in the test sample vs. the control sample. *BP* is ratio of book value to market value. The change is computed as the difference between the book-to-price ratio at the last fiscal year end prior to the *IRDATE* and the first fiscal year end occurring more than one year after the *IRDATE*. We require at least one year after to ensure that the IR actions have had sufficient time to have an impact. We exclude any observations with a negative BP ratio at either point. For each change, we require that the test company and its matched control company both have nonmissing data. N is the number of observations. The OTHER OTC exchanges are the OTC Bulletin Board and the Pink Sheets.