

Who Hires Investor Relations Firms? The Role of Managerial Entrenchment

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Abstract

This paper investigates the role of managerial entrenchment in the decision to hire an investor relations specialist. Managers of small and mid-cap firms spend considerable resources on hiring investor relations (IR) firms. This paper proposes a hypothesis to explain this spending. We argue that more entrenched managers are less likely to hire IR firms, because such managers are less likely to have their compensation tied to stock returns and be more wary of outside attention from the market. Using a common definition of managerial entrenchment, we show that entrenched managers are indeed less likely to hire an IR firm. We also examine the relationship between the method of payment of the IR firm (cash or stock) and future performance of the client. If an IR firm is paid in stock, it has an incentive to expend more effort on its client's behalf, thus leading to increased client performance. Our evidence shows that there is indeed a positive relationship between payment in stock and future client performance.

Keywords: investor, managerial entrenchment, firms

1. Introduction

Managers of small and mid-cap firms spend significant resources on investor relations (IR) (Note 1) activities (Hong & Huang, 2005) (Note 2). In the United States, from 1999 to 2007, there were at least 503 listed firms that hired or retained an investor relations firm. For example, on March 15, 2005, Sancon Resources Recovery Inc. (with a market value of \$108 million at that time, OTCBB) hired Avalon Partners Inc., for one year to promote the company. Avalon Partners were paid \$36,000 in cash for their services.

However, why such spending occurs remains a question. In a perfectly transparent market, with complete information flows, these expenditures would be unnecessary. The existing literature, however, has cited numerous reasons that could explain the motivations of managers to hire an IR firm. Bushee and Miller (2012) argue that managers could be motivated by attempting to increase visibility, stock liquidity, and stock price and to reduce the volatility of returns. They also argue that IR firms may be hired to provide information to the market about important events (e.g., hiring new management, acquisition or private placement). In a related theory paper, Healy and Palepu (2001) describe different motivations for a firm to *voluntarily* disclose more information about the firm (which is related to, but could also be different from, the decision to hire an IR firm). Their list also includes motives related to increasing stock returns (e.g., corporate control contests, stock compensation, and management talent signaling), as well as providing information about important events (e.g., capital market transactions and litigation). Existing accounting literature looks at firms' voluntary disclosures and investor relations and the impact of these things on investors and the firm (Bergman et al., 2008; Kang, 2008; Kirk & Vincent, 2014). These papers look at corporate disclosures by the firms themselves. However, when a firm hires an investor relations firm, it is outsourcing this important function to a third party. The major findings of our paper are consistent with the hypothesis that hiring an investor relations firms might be a costly signal by managers to inform investors about the quality of the firm. Managers of firms with good prospects hire investor relations firms to signal that their firm has good investment opportunities. In this respect, our paper is closer to existing literature that looks at voluntary disclosure by firms before IPO. Chemmanur and Paeglis (2005) investigate the performance of IPO firms and the quality of the management. Hiring an investor relations firms might be a signal of good-quality managers.

The aim of this paper is to empirically test two hypotheses about the relationship between IR firms and their clients not previously examined in the literature. First, we examine whether *managerial entrenchment* impacts

the decision to hire an investor relations firm. This builds on the hypotheses of Bushee and Miller (2012) and Healy and Palepu (2001) that managers may hire IR firms for their own benefits. This paper contributes by linking this IR literature with the managerial entrenchment literature by examining the *characteristics* of managers who may be more likely to hire IR firms for their own benefit. Specifically, we examine the hypothesis that more entrenched managers are less likely to hire investor relations firms because their payment may be less related to stock market performance and also because more voluntary disclosure will make them susceptible to increased scrutiny by investors. Less entrenched managers, on the other hand, may be more likely to hire IR firms, because their payment may be more related to stock performance, which an IR firm may increase. Ours is the first paper in the literature to empirically examine this hypothesis. We find that firms with more entrenched managers are indeed less likely to hire an investor relations firm.

The second hypothesis we examine in this paper is whether there is a relationship between the way an IR firm is paid (in cash or with stocks) and the subsequent performance of the client. This is the first paper to examine the relationship between the means of payment (i.e., cash or stock) to an IR firm and the future performance of the client firm. Specifically, we examine the hypothesis that there is a positive correlation between an IR firm being paid in stock (rather than cash) and the future performance of the client. There are two possible reasons for this relationship. First, an IR firm paid in shares (not in cash) may exert greater effort on behalf of its client to increase visibility, thus improving its share price, market liquidity, or sales in future. Second, if the IR firm has access to favorable private information about the future performance of its client, then it would accept payment in equity, but if it has negative expectations of its client future equity prices, then it would demand to be paid in cash.

An important issue with these two stories is that they imply reverse causation. The first argument (that an IR firm paid in stock has an incentive to expend greater effort on its client's behalf, thus increasing the stock price) implies that a payment in stock causes an increase in subsequent firm performance (as measured by stock price, liquidity, etc.). The alternative story (that if the IR firm acquires positive private information about future stock performance of the client, it will accept payment in stock) implies that the forecasts of future performance cause the payment in stock. Specifically, we control for this by considering different proxies for the private information acquired by the IR firm. First, we examine the impact of past accounting variables, such as sales and operating performance (as a proxy for public information), as well as future accounting variables (as a proxy for information that may be private at "t," but public at "t+1"), on the stock/cash choice. Second, we measure private information as the residual in operating performance forecasting models and examine if this measure of private information impacts the stock/cash choice. We find that all of these variables are insignificant, implying that private information does not drive the stock/cash choice. This result thus implies that firms paid in stock will expend a greater effort, thereby increasing future share performance of the client. We empirically find that firms that pay shares to their IR firms do indeed perform better ex post as measured by a variety of different market-based variables (i.e., liquidity, volatility, and returns).

The outline of the paper is as follows: In Section 2 we discuss related literature and develop our hypotheses, and in Section 3 we provide a description of the data. We describe our methodology in Section 4 and provide results in Section 5. We conclude in Section 6.

2. Theoretical Background, Hypotheses, and Related Literature

Hypothesis 1: Entrenched managers are less likely to hire investor relations firms.

Merton (1987) argues that the dissemination of information could enhance the public profile of a firm and lead to increases in stock price. Voluntary disclosure might reduce information asymmetry between management and outside investors, possibly leading to an increase in the stock price of the firm (Diamond and Verrecchia (1991)). Diamond and Verrecchia (1991) also suggest that adverse selection costs are an important determinant of the liquidity of a stock. Increased information flow could reduce these costs and hence lead to more a liquid stock. These theories suggest that investor relations activities could lead to higher valuation of firms. From this argument it is possible to assert that managers who want to maximize firm value will be more likely to hire investor relations firms. Numerous studies have documented the effects of voluntary disclosure on firm performance. For example, Botosan (1997) finds that the cost of equity capital decreases for firms that voluntarily disclose more information. Kirk and Vincent (2014) look at the initiation of in-house investor relations departments and its effect on firms' liquidity and value. They find that firms experience an increase in disclosure, the number of analysts, liquidity, and firm value. They also find that, despite the implementation of Regulation Fair Disclosure (RFD), these firms continue to reap the benefits of voluntary disclosure through their internal investor relations activities. In a recent study, Balakrishnan et al. (2014) use the closure of 43 brokerage

firms from 2000–2008 as a natural experiment to investigate the effects of voluntary disclosure on firms' liquidity and value. More precisely, they treat the closure of these brokerage firms as an exogenous shock that affects the information environment of the firms covered by the analysts of these brokerage firms. They find that the affected firms experience a drop in liquidity after the brokerage firm's closure. However, firms that provide more voluntary disclosure are able to recover from this liquidity shock within a quarter. They also find that this improvement in liquidity leads to an increase in firm value. Chang et al. (2014) investigate the relationship between voluntary disclosures by firms on their Web site and analyst coverage. More precisely, they extend the literature that looks at a firm's Web site for investor relations disclosure and investigates its impacts on analyst coverage. They find that the increased disclosure by these firms leads to a decrease in forecasting errors by analysts. Hoffmann and Fiesler (2012) look at nonfinancial factors that are important for investor relations activities. They interview equity analysts to ask them about factors that firms should provide through their investor relations activities. They find that analysts consider investor relations as an access point from which they can get timely data about the firm and its management. Their study also emphasizes the importance of corporate governance information in investor relations activities.

In this paper we extend the IR literature by examining the *motives* of managers who are likely to hire an IR firm. In particular, we examine the role of managerial entrenchment in the IR hiring decision, an issue that has not previously been examined in the IR literature. The literature on managerial entrenchment (McConnell & Servaes, 1990; 1995) has argued that entrenched managers are less likely to be concerned with maximizing the value of the firm compared with less entrenched managers. Our argument here is based on the theoretical work of Bushman and Smith (2001, 2003), who postulate that financial accounting information strengthens internal and external control mechanisms. They also emphasize the importance of overall transparency in disciplining managers. Bushman and Smith (2003) define overall transparency "as the widespread availability of relevant, reliable information about the periodic performance, financial position, investment opportunities, governance, value, and risk of publicly traded firms" (66). Edlin and Stiglitz (1993) identify different sources of rent-seeking behavior exhibited by entrenched managers: "all the distortions that we identify can be reduced to the extent that managers are required to report inside information faster and more accurately" (1,309). An investor relations firm can help in disseminating this insider information to outside investors "faster and more accurately."

Our paper is also related to Rao and Sivakumar (1999), who find that investor relations departments were established during the 1980s and 1990s, when managers were coerced into expanding shareholders' rights. Our research extends their work and investigates if more entrenched managers are less likely to hire an investor relations firm. Therefore, we argue here that managers who are not entrenched will have greater incentive to increase the value of their firms' shares compared with managers who are entrenched. As an example, managers who are not entrenched could possibly have to persuade the remuneration committee of their board that their performance warrants an increase in compensation. This could motivate such a manager to hire an IR firm in order to increase the firm's share price. On the other hand, managers who are already entrenched will be less likely to use stock price performance to persuade the board of their value, simply because of the existing nature of their entrenchment. Similarly, in the case of entrenched managers, an increase in information about the firm might increase the scrutiny of these firms by existing and future investors. This will be detrimental to the interests of these entrenched managers. For these reasons, we hypothesize that entrenched managers will be less likely to

A key issue in empirically testing this hypothesis is the measurement of entrenchment. We follow Morck, Shleifer and Vishny (1987), and many other papers, in measuring entrenchment by using the proportion of outstanding stock that is owned by inside managers. The key issue in this literature, however, is to determine "cutoffs" at which the level of inside ownership is considered "entrenchment." Three distinct arguments are made in this literature concerning the link between the percentage level of insider ownership and entrenchment. For those firms in which insider ownership is very low (e.g., lower than 4% or 5%), it can be argued that the level of entrenchment is low and that the managers have to ally their behavior with the motivations of the large majority of outside shareholders, that is, to maximize the value of the firm. At the other extreme, where insiders own a large proportion of the stock (e.g., more than 25% or 30%), it can also be argued that inside managers have an incentive to maximize the value of the firm (i.e., to align their behavior with the motivations of the outsiders), simply because they own a large proportion of the stock. Thus, in both cases, it can be predicted that insiders will act as if they are not entrenched.

On the other hand, the entrenchment literature Morck, Shleifer, and Vishny (1987) argued that if the insiders hold a "moderate" proportion of stock between these cutoffs (e.g., more than 4% or 5% but less than 25% or 30%), then these insiders will not face pressures to align their behavior with those of the outsiders to maximize the

value of the firm. In the existing literature, these managers are considered entrenched. Thus we consider managers who will not face pressure to align their behavior with those of the outsiders to maximize value of the firm as entrenched.

This distinction between levels of inside ownership as high, low, or moderate, where moderate levels are considered entrenched, has been empirically examined in a variety of contexts. For example, Morck, Shleifer, and Vishny (1987) empirically test the impact of insider ownership on firm value as measured by Tobin's Q. They found that a curvilinear relationship exists between insider ownership and the value of the firm. Specifically, they found that when insiders own very small amounts of outstanding stock (e.g., 0%–5% of the firm), then firm value rises (as measured by Tobin's Q). However, when insiders own a moderate proportion of outstanding stock (e.g., between 5% and 25%), then firm value will fall as measured by Tobin's Q. It then drops when insider ownership rises from 5%–25% and increases again when the insider ownership is greater than 25%. (note 3) Since then various studies, notably McConnell and Servaes (1990, 1995), Hermalin and Weisbach (1991), and Adams and Santos (2006), have all documented that a strong relationship exists between insider ownership and the value of the firm as measured by Tobin's Q or return on assets. (Note 4)

Hypothesis 2: Clients whose performance improves after the use of the IR firm are more likely to have paid their IR firms using stock rather than cash.

While our first hypothesis examines clients' motivations before hiring a IR specialist (i.e., examining a determinant of which firms hire IR firms), our second hypothesis is forward looking, examining the future of the client firm after the use of the IR specialist. In particular, we examine whether there is a relationship between how the IR firm is paid (stock or cash) and the ex post future performance of the firm (as measured by stock price, liquidity, sales, etc.). No previous study in the literature has examined future client performance after hiring an IR firm.

As we describe in our data section below, there is a wide variance in the data on how IR firms are paid, ranging from all stock to all cash, to some proportion of both stock and cash. While these data on the means of IR payment are available to the market, no academic studies have examined whether this information may be of use to the market in terms of its predictive power of future performance (e.g., share price, liquidity, and sales). We hypothesize here that these data could provide information on the future performance of the client. Specifically, we examine if there is a positive relationship between an IR firm being paid in stock and positive future performance of the client.

We assume in this context that the IR firm has some negotiating or bargaining power to accept payment in cash or stock or some combination of the two. The means of payment in an IR contract, like all other contracts, needs to be accepted by both parties, and thus we argue it is unlikely that the IR firm will accept a means of payment (stock or cash) that it believes to be unfavorable.

We provide two separate arguments for why an IR firm that accepts stock as a means of payment is likely to be associated positively with a client whose performance increases over time. First, an IR firm who holds its client's stock is likely to have an incentive to increase the value of that stock, and thus the IR firm in this context is likely to expend greater effort on behalf of the client compared to when the IR firm was paid in cash. When the incentives of the IR firm and the client are thus aligned, it is possible that the efforts of the IR firm, *ceteris paribus*, will increase the market's assessment of the client, thus increasing the clients share price and returns, etc.

The alternative argument for a positive relationship between an IR firm paid in shares and future performance of the client is that the IR firm may have access to private information about the client during the period leading up to the payment from client to IR firm. It is possible to argue that if the IR firm has access to this private information, and uses this private information to make positive predictions about future growth of the firm, then it may be more likely to accept payment from the firm in stock. On the other hand, if the IR firm uses the private information to form negative predictions about the future value of the firm, then it is less likely to accept payment in stock and more likely to accept payment in cash.

Reverse causality is a key concern with these two arguments, for a positive relationship between payment in stock and future stock performance. The first argument (that the IR firm will expend a greater effort on behalf of the client if it is paid in stock, thus raising the client's performance in the future) implies that payment in stock will *cause* future increases in performance. The second argument (that if the IR firm receives positive private information that the future prospects of the firm, then this will result in the IR firm accepting stock rather than cash) implies that expectations of future performance *cause* payments to be made in stock.

We control for this in two ways. First, we argue that private information about the client at time “t” will be reflected in accounting information about the client in the following year “t+1.” Second, we derive a proxy for private information from the residual of operating performance forecasting models. We are thus able to test if private information at the time of the IR contract (as reflected in accounting information in the following year, or alternatively the residual from performance forecasting models) will impact the stock/cash choice of payment at time “t.” If we are able to exclude this link (i.e., insignificant coefficients of private information proxies on the stock/cash choice), then we are able to conclude that causality runs in the other direction, that is, that payment in stock leads to an increase in effort after the fact by the IR firm.

3. Data

Our data on publically traded firms that have hired an IR firm are taken from filings with the Securities and Exchange Commission (SEC). Our data cover the period 1996–2007. Our data include 503 instances in which a publicly trading firm hired or retained an IR firm. If the firm hired an investor relations firm for the first time, we consider it a new event and include that data in our study. If the firm has simply extended the contract with the investor relations firm, we consider it a retention and do not classify it as a new event, and thus it is not included in our study. Of these cases, we were able to find the exact date of the contract for 326 firms. Out of these firms, 66 had more than one contract. We included these firms only once and keep only the earliest date that they hired an investor relations firm. We are thus left with 260 usable data points. Because our key empirical tests involve both market-based and accounting-based data, our sample is further restricted to firms that have both accounting- and market-based data available. Of all the firms in our sample that have hired an IR firm, 131 firms have accounting data in our sample.

We collect accounting data from CRSP and Securities and Exchange Commission filings. We collect stock market data from DataStream. Thompson Financial is our first source for insider ownership data. This data source does not cover small/medium-sized firms. Accordingly, we complemented this data source by hand-collecting it from firms’ online filings with the Securities and Exchange Commission.

4. Methodology

4.1 Testing Hypothesis 1: Entrenched Managers Hire IR Firms

We use the logistic regression methodology to examine if managerial entrenchment determines the decision to hire investor relations firms. We use a matching approach to match our sample of firms that have hired IR firms matched with other firms in the CRSP database that have not hired IR firms. We match based on four different criteria: (1) the stock exchange on which their shares are traded, (2) the four-digit industry code, (3) the fiscal year, and (4) the market value of the firm. We restrict the market value of our matched sample to within $\pm 25\%$ of the range of our sample. Our accounting data are taken from the fiscal year before the date of the hiring of the investor relations firm. Based on the above criteria, we match the 131 firms for which accounting data exist (see above) with 2,938 firms who have not hired IR specialists. Our dependent variable is thus a binary variable that is coded 1 if the firm has hired an IR firm and coded 0 if the firm has not hired an IR firm.

Our main independent variable of interest is whether or not the managers of the firm are entrenched. As described above, we follow the literature by defining entrenched managers based on whether managers own a “moderate” proportion of outstanding shares. We create a dummy variable called “Entrenched” that takes the value of one when the management of the firm owns between 5% and 30% of the firm, and zero otherwise. As a robustness check we examine other cut-off points (e.g., 5% and 25%).

Besides the “Entrenched” independent variable, we also include a large variety of other control variables that could also possibly impact the decision to hire an IR firm. These include a variety of different accounting and market variables, which are listed in Table 1A. We use three different measures of firm growth: Tobin’s Q, research and development standardized by sales, and its capital expenditures ratio. We argue that a rapidly growing firm has an incentive to release more information about their future plans and prospects, and this will give the firm motivation to hire an IR firm. In other words, we expect that firms with higher growth potential are more likely to hire an investor relations specialist. We include a free cash flow variable (Jensen, 1986) because there is greater uncertainty about how the firm will employ or use its excess cash flow. We expect that firms with more free cash are more likely to hire an investor relations specialist to reduce the uncertainty about the potential use of cash. As discussed above, Hong and Huang (2005) argue that managers might hire an investor relations specialist to create a liquid market for their shares. For this reason we expect highly levered firms would be less likely to hire an investor relations specialist. With respect to firm size, small firms are more opaque, and, in general, their prices are more sensitive to news. It can be argued that smaller firms are thus more likely to hire an investor relation specialist to reduce information asymmetry. We measure firm size by assets and market

capitalization.

We also use institutional ownership as one of the variables. There is strong evidence that institutional holding leads to better governance and oversight, which could impact a firm's decision to hire an IR firm.

4.2 Testing Hypothesis 2: The Method of Payment Is Related to Future Client Performance

This section examines the hypothesis that the method of payment is related to future client performance. Our data include various measures of future firm performance, as well as measures of the firm's means of payment of its IR firm.

We create a dummy variable that takes the value one if the investor relations firm is paid in cash and zero otherwise. There are 43 firms that used cash as the method of payment and 77 firms that used equity-based compensation methods. In a few cases, the firms used cash, plus stock, as compensation. We consider a firm as cash paying if more than 60% of the compensation was in the form of cash (Note 5).

As described above, an important issue with testing the relationship between the means of payment and future client performance concerns endogeneity and reverse causality. One possible hypothesis is that if an IR firm is paid in stock (and not in cash), then the firm has an incentive to expend more effort, resulting in better performance by the client. In this case causality runs from the means of payment to future performance. An alternative possible causality relationship is that the IR firm has access to private information about the positive future performance of the firm, thus it accepts payment in stock (rather than in cash). In this case causality runs from the expectation of future performance to the means of payment.

Because of this causality issue, we adopt two separate methodologies. First, we examine univariate tests between the means of payment and future performance to examine if the correlation (but not the causation) is indeed positive. Second, we run a logistic regression that includes proxies for the private information possibly acquired by the IR firm (as described above). We aim to isolate whether there is indeed any relationship between private information acquired by the IR firm and the means of payment (stock or cash) of the IR firm.

4.2.1 Univariate Analysis

In terms of our univariate tests, we use a *t*-test to compare the means of different variables before and after the firms hired investor relations firm. Our null hypothesis is that there is no significant difference in the mean values. We use a paired two-sample mean *t*-test and two-sample mean *t*-test assuming equal (unequal) means. We look at the subsequent performance of the firm by comparing different accounting- and market-based variables. In addition to looking at future accounting variables we also look at past and future market-based variables (such as returns and liquidity).

In terms of market-based variables, we use buy and hold returns and average daily returns as measure of investor welfare. We use average daily volume, the number of trading days, and daily turnover as measures of liquidity of the stock. Following Bushee and Miller (2012), we put more emphasis on the number of trading days and daily volume as measures of liquidity. Our sample consists of small- and medium-sized firms, and for these firms daily turnover is probably not the best indicator of liquidity.

In terms of accounting variables in our univariate tests, we use Tobin's Q, research and development, capital expenditure, and sales growth as measures of growth. We also examine the size of firms as measure by assets. We also examine free cash flow to see if these firms are facing cash flow problems. A firm that does not have sufficient cash on hand cannot pay in cash. However, if the firms that are paying noncash securities as compensation have free cash flow or, alternatively, if cash-paying firms are having cash-flow difficulties, then the form of payment is one possible indication that investor relations firms are getting private information about the prospects of these firms. Another important variable is leverage, because we expect firms with good prospects to be able to raise capital from the market. These firms might experience a decline in leverage because of an increase in equity value.

4.2.2 Logistical Analysis

In addition to these differences, in the mean tests described above, we also utilize logit-based regression tests to account for the reverse causality issue described above. One of the possible directions of causation between the means of payment and future client performance is that the IR firm may have access to private information before it signs a contract. If private information indicated positive future growth for the client, then the IR firm may accept payment in stocks rather than in cash. As described above, we use two approaches (future accounting variables and residuals from operating performance prediction equations) to examine if private information is used in the stock/cash choice. If, for example, we find that our measures of private information are not

significantly related to the means of payment choice, then this implies that the inside private information argument is less likely to be an explanation for the direction of causality.

5. Results

5.1 Descriptive Statistics

In Table 1, we provide descriptive statistics for the firms in our sample, as well as the control sample. The sample firms, on average, have a market capitalization of almost \$32 million. This is consistent with Bushee and Miller (2012), who find that smaller and less visible firms initiate new investor relations strategies. These firms have high insider ownership of 35.60%. Our sample firms also have high institutional ownership. This lends support to Rao and Sivakumar (1999), who find that investor relations activities are initiated by subtle pressure from outside stakeholders. This also lends credence to the literature that postulates that institutional investors are better at monitoring firms and protecting shareholders rights (Brickley et al., 1988; McCahery et al.). Table 1 also shows that sample firms have a high Tobin's Q, indicating that these firms have good future prospects. As discussed above, firms with good growth opportunity might want to provide more information investors about their prospects. This also suggests that hiring an IR firm could be a costly signal of quality about the firm's prospects to investors.

Table 1. Descriptive statistics for sample firms and the matched control group, 1985-2005

| Variables | Sample Firms | | | | | Control Group | | | | |
|------------------------|--------------|----------|---------|-----------|----------|---------------|----------|----------|-----------|-----------|
| | Obs | Mean | SD | Min | Max | Obs | Mean | SD | Min | Max |
| Insider Ownership | 119 | 0.3560 | 0.2412 | 0.0000 | 1.0000 | 2,706 | 0.1882 | 0.2158 | 0.0000 | 1.0000 |
| Market Value | 131 | 31.9738 | 46.1790 | 0.0134 | 245.9170 | 2,938 | 64.7648 | 72.5991 | 0.0047 | 299.0338 |
| Capital Expenditure | 131 | 0.1566 | 0.9223 | 0.0000 | 10.3809 | 2,938 | 0.0453 | 0.0990 | 0.6797 | 2.1250 |
| Leverage | 131 | 1.8018 | 3.8818 | 0.0000 | 23.7347 | 2,938 | 9.3140 | 205.0375 | 0.0000 | 632.4000 |
| Institutional Holding | 119 | 0.1723 | 0.2259 | 0.0000 | 1.0000 | 1,852 | 0.0007 | 0.0189 | 0.0000 | 0.5765 |
| Asset | 131 | 10.10116 | 34.9993 | 0.000532 | 353.794 | 2,938 | 70.29675 | 219.0106 | 0.0010 | 7253.62 |
| Research & Development | 106 | 1.3286 | 4.6100 | 0.0000 | 37.0007 | 2,743 | 9.5989 | 142.5254 | 0.0000 | 2830.2500 |
| Free Cash Flow | 131 | -1.3462 | 20.0797 | -123.2149 | 118.6721 | 2,938 | -0.6758 | 13.6343 | -509.3000 | 62.2941 |
| Tobin's Q | 131 | 8.0725 | 5.6339 | 0.4630 | 15.7100 | 2,938 | 3.5012 | 3.9981 | 0.3150 | 15.7100 |

This table reports summary statistics for the 131 firms who hired investor relations specialists for the 1995 to 2007 period. The control group are matched based on four main criteria: (1) four-digit SIC codes, (2) the equity market for the security (NASDAQ, New York Stock Exchange, American Stock Exchange, OTCBB, or OTC), (3) time, that is, the fiscal year before the event, (4) the market value of the firm (we restrict the control sample to within 25% of the range of our sample). The total number of firm-year observations of the control group is 2,938.

5.2 H1: Entrenched Managers Hire IR Firms

Our results for this hypothesis are reported in Table 2. There is a binary (logit) dependent variable in these regressions that takes a value of one when a firm hires an IR specialist and a value of zero when the (matched) firms do not hire an IR specialist. The key independent variable of interest is the ownership dummy, which takes a value of one when insiders hold between 5% and 30% of the equity outstanding. As described above, this serves as a measure of ownership entrenchment.

Our main result in Table 2 is that our entrenchment variable is highly significant and negative across all the various specifications reported. In other words, our data are strongly consistent with our hypothesis (H1) that entrenched managers are less likely to hire IR firms. Our study contributes to the literature by combining elements of the entrenchment work with elements of the IR/voluntary disclosure studies. There are two possible reasons for these results. First, our results could imply that entrenched managers will be less inclined to hire IR specialists because they are less likely to have their compensation linked to the market's view of their companies' share performance. Second, our results could also imply that entrenched managers do not hire IR firms because these managers do not want too much vigilance from the market.

In Table 2 we provide a variety of different specifications that include various other control variables (other than managerial entrenchment) that could explain the decision of a firm to hire an IR firm. Across all of our specifications, we find that the market value of firms or assets of firms is negative and significant. This implies

that smaller firms are more likely to hire IR firms. This finding is consistent with the argument that smaller firms are more likely to feel the need to bring information to the attention of the market, compared with larger firms, which usually have large investor followings (Bushee & Miller, 2012).

Table 2. Logistical probability of hiring an investor relations firm

| Variables | Model 1 | | Model 2 | | | Model 3 | | | Elasticity |
|------------------------------------|-------------|----------------|-------------|-------------|----------------|-------------|-------------|----------------|-------------|
| | Coefficient | Standard Error | Elasticity | Coefficient | Standard Error | Elasticity | Coefficient | Standard Error | |
| Market Value | | | | -0.2469 | 0.0655 | *** -0.8017 | -0.4862 | 0.0774 | *** -1.7002 |
| Capital Expenditure | 0.3659 | 0.8988 | 0.0170 | | | | 2.7648 | 1.0881 | ** 0.1204 |
| Leverage | -0.1479 | 0.0408 | *** -1.1839 | -0.1521 | 0.0424 | *** -1.2163 | -0.0248 | 0.0247 | -0.0244 |
| Institutional Holding | | | | | | | 31.9765 | 3.8516 | *** 0.3411 |
| Asset | -0.4596 | 0.0741 | *** -1.3824 | | | | | | |
| Research & Development | -0.0102 | 0.0106 | -0.0854 | -0.0108 | 0.0112 | -0.0902 | | | |
| Free Cash Flow | -0.0023 | 0.0043 | 0.0016 | -0.0024 | 0.0047 | 0.0016 | 0.0007 | 0.0093 | -0.0006 |
| Tobin's Q | 0.0944 | 0.0255 | *** 0.3096 | 0.2108 | 0.0205 | *** 0.6908 | | | |
| Owner Dummy (5%<Insider<30%) | | | *** | | | *** | | | *** |
| | -0.5089 | 0.1579 | -0.5659 | -0.5838 | 0.1576 | 0.6483 | -0.9551 | 0.3288 | 0.5856 |
| Constant | -3.1411 | 0.3763 | | -0.0108 | 0.0112 | *** | -2.6919 | 0.3666 | *** |
| Number of Observations | 2,787 | | 2,789 | | | 1,971 | | | |
| Wald χ^2 | 160.46 | | 135.05 | | | 382.39 | | | |
| Pseudo R^2 | 0.1781 | | 0.1499 | | | 0.4255 | | | |
| Log Pseudo Likelihood | -370.2706 | | -383.053 | | | -258.193 | | | |

This table reports our panel logit results for the probability of firms hiring an outsider as an investor relations specialist. There are 131 firms in our sample with usable accounting data. The dependent variable is binary and takes a value of one for the firms hiring an investor relations specialist and zero for control firms. The control group is matched based on four main criteria: (1) four digit SIC codes, (2) the equity market for the security (NASDAQ, New Stock Exchange, American Stock Exchange, OTCBB, or OTC), (3) the market value of the firm (we restrict the control sample to within 25% of the range of our sample), and (4) time, that is, the fiscal year before the event. The standard error (SE) is corrected for firm clustering following Peterson (2006). The variable definitions are presented in Appendix 1. Elasticity is calculated as $d(\ln F)/d(\ln x)$, where d is the first derivative, $\ln(F)$ is the natural logarithm of the density function, and $\ln(x)$ is the natural logarithm of the explanatory variable and is evaluated at the sample means of the explanatory variables. We find qualitatively similar results without imposing restrictions on the market value of the control sample, as well as without excluding firms whose insider ownership data are not available on Thompson Financial. *, ** and *** indicate a p value of 10%, 5%, and 1%, respectively.

Furthermore, we also find that firms with greater capital expenditure are significantly more likely to hire an IR firm. This is consistent with the explanation that firms hire IR firms to make the market aware of important events, such as capital equipment expenditures. We also include an institutional holding variable and find that the greater the amount of institutional holdings, the greater the likelihood of hiring an IR firm. This is consistent with the argument that managers who are subject to pressures from institutions will hire IR firms to ensure that these stockholders are aware of developments in the firm (Rao and Sivakumar (1999)). We also find that firms with higher Tobin's Q (which is a proxy for potential future growth) are more likely to hire an investor relations firm. This is consistent with the managers of these firms hiring IR firms to inform the market of growth opportunities.

5.3 H2: Means of Payment Is Related to Future Client Performance

We report the results for H2 (that the means of payment is related to future client performance) in Tables 3 to 6.

5.3.1 Market-Based Measures of Performance

As an initial examination of the data, Table 3 summarizes the changes in liquidity and performance of the shares of the firms before and after hiring an IR firm. We compare the means of a variety of measures a quarter before and a quarter after the date of hiring an IR firm.

We find that all three measures of liquidity (namely, the number of trading days, average daily volume, and turnover) increase significantly during the quarter after the firm hired an investor relations firm. In other words, the data support the argument that IR firms will be successful in increasing liquidity. We also find that return volatility significantly decreases after hiring an investor relations firm. This finding is consistent with increased voluntary disclosure by the IR firm, leading to less information asymmetry, which in turn, leads to lower return volatility. However, we also find that these firms experience lower average daily returns after hiring an investor relations firm. Thus, even with hiring an IR firm, a firm's returns could fall. We discuss one possible explanation (i.e., the difference between IR firms paid in cash or stock) below. The key point of the results in Table 3 is that they do not distinguish between those IR firms paid in cash and those paid in stock. We now examine the impact of the means of payment.

Table 4 summarizes the comparisons for market-based variables for cash versus noncash firms. In Table 4 the most important result is that noncash firms experience better buy and hold returns, as well as daily returns, compared with cash firms. In both cases, daily returns and the buy-and-hold returns exhibit negative returns for cash-paying firms, while the non-cash-paying firms display positive returns. Moreover, the differences are statistically significant for both cases.

Table 3. Impact of hiring investor relations specialists on liquidity and returns of the firm

| Variable | Number of Observations | Mean during One Quarter before Promotion | Mean during One Quarter after Promotion | t-stat | p-value |
|------------------------|------------------------|--|---|--------|---------|
| Number of Trading Days | 195 | 49.005 | 52.593 | 3.648 | *** |
| Volume | 195 | 55.488 | 70.285 | 2.249 | *** |
| Turnover | 195 | 0.003 | 0.004 | 1.333 | * |
| Buy Hold | 195 | 0.245 | 0.15 | -1.087 | |
| Daily Return | 195 | 0.009 | 0.004 | -2.417 | *** |
| SD (Returns) | 195 | 0.113 | 0.093 | 2.492 | *** |

This table looks at the impact of the decision to hire an investor relations firm on the performance of the firm based on different market-based variables. We calculate the number of trading days, volume, turnover, buy and hold returns, average daily returns, and standard deviation of daily returns during the quarter before the firm hired an investor relations firm. We then collect these variables for the quarter after the firm hired an investor relations firm. *, **, and *** indicate a p value of 10%, 5%, and 1%, respectively.

Furthermore, it is possible that these results in Table 4 could help us better explain the results in Table 3, that the returns of the average client of IR firms declines. It seems that negative buy and hold returns in Table 3 are driven by firms that pay cash as compensation to investor relations firms, rather than firms that pay stock, where the returns increase. We also find that firms that pay cash experience a lower decrease in the standard deviation of returns, as well as reduced volume, compared with noncash firms.

Table 4. Comparison between firms that paid cash as payment and firms that did not

| Variables | No Cash | | | | | Cash | | | | | Diff. in Mean | SE |
|----------------------------|---------|--------|--------|---------|---------|------|--------|--------|---------|--------|---------------|----------|
| | Obs. | Mean | SD | Min | Max | Obs. | Mean | SD | Min | Max | | |
| Change No. of Trading Days | 100 | 3.340 | 14.970 | -50.000 | 53.000 | 56 | 5.143 | 11.857 | -27.000 | 49.000 | -1.803 | 14.159 |
| Change in Volume | 100 | 18.801 | 45.139 | -49.300 | 170.722 | 56 | 3.348 | 37.474 | -82.815 | 89.429 | 15.452 | 42.567** |
| Change in Turnover | 100 | 0.001 | 0.000 | -0.002 | 0.004 | 56 | 0.000 | 0.000 | -0.007 | 0.009 | 0.000 | 0.000 |
| Change in Buy Hold | 100 | 0.016 | 0.790 | -1.453 | 1.745 | 56 | -0.180 | 1.082 | -3.371 | 1.463 | 0.196 | 0.905* |
| Change in Daily Return | 100 | 0.003 | 0.042 | -0.166 | 0.029 | 56 | -0.021 | 0.057 | -0.152 | 0.025 | 0.057 | 0.048** |
| Change SD (Returns) | 100 | -0.021 | 0.057 | -0.083 | 0.080 | 56 | -0.003 | 0.042 | -0.146 | 0.061 | 0.018 | 0.048** |

In this table, we compare the changes in different market-based variables for firms that paid cash and firms that did not pay cash as compensation to the investor relations firms. We calculate the number of trading days, volume, turnover, buy and hold returns, average daily returns, and standard deviation of daily returns during the quarter before the firm hired an investor relations firm. We then collect these variables for the quarter after the

firm hired an investor relations firm. We calculate the difference between these variables for each firm. Then we divide our data based on the fact that the firm paid cash as compensation or used securities to pay the investor relations firm. Then we compare these variables using a *t*-test. We also report the difference in means and standard errors (SE). *, **, and *** indicate a *p* value of 10%, 5%, and 1%, respectively.

5.3.2 Operational Performance (Accounting Data)

Table 5 compares cash and noncash firms based on changes in operational performance, measured by different accounting variables. We compare these accounting variables across the two categories (i.e., cash firms vs. noncash firms). We find that noncash firms have a significantly higher increase in assets and leverage. Although capital expenditure and free cash flow are not significant at the 10% level of significance, this does indicate that noncash firms spend more on capital expenditure and have more free cash one year after hiring the investor relations firms than cash-paying firms.

Our results indicate that firms that pay noncash compensation to the investor relations firms do better subsequently as compared with firms that pay cash. We do not find any evidence that these results are driven by investor relations firms creating an active market for these securities. Our results indicate that these firms perform better because they get bigger, have more cash, and increase their capital expenditure and research and development expenditure. These firms are also able to reduce their leverage ratio.

Table 5. Comparison of change in different accounting variables between firms paying cash and noncash compensation to investor relations firms

| Variables | All the Firms in the Sample | | | | Firms that Paid Cash (Cash Firms) | | | Firms that Did Not Pay Cash (Noncash Firms) | | | Comparison of Noncash vs. Cash Firms | |
|------------------------|-----------------------------|--------|--------|-----------------|-----------------------------------|--------|--------|---|--------|--------|--------------------------------------|-----------|
| | Obs | Mean | SD | <i>p</i> -value | Obs | Mean | SD | Obs | Mean | SD | Difference in Mean | SE |
| Free Cash Flow | 143 | -6.735 | 6.8214 | 0.3252 | 43 | -1.057 | 6.188 | 77 | 1.215 | 13.307 | 2.272 | 11.299 |
| Tobin's Q | 131 | -0.734 | 0.5332 | 0.1710 | 43 | -6.388 | 20.656 | 77 | -4.018 | 19.425 | 2.369 | 19.872 |
| Capital Expenditure | 126 | -0.068 | 0.0829 | 0.4136 | 43 | -0.006 | 0.054 | 77 | 0.014 | 0.109 | 0.020 | 0.093 |
| Leverage | 146 | 0.8328 | 1.0028 | 0.4076 | 43 | -0.677 | 1.393 | 77 | 0.302 | 1.676 | 0.979 | 1.581 *** |
| Log Asset | 146 | 0.5718 | 0.1485 | 0.0002 | 43 | 0.736 | 1.126 | 77 | 0.343 | 1.479 | -0.393 | 1.364 * |
| Research & Development | 110 | -0.148 | 0.8568 | 0.8629 | 37 | 0.085 | 0.669 | 55 | 0.528 | 2.880 | 0.443 | 2.346 |
| Change in Sales | 145 | 2.5959 | 1.3173 | 0.0507 | 43 | 0.435 | 1.104 | 77 | 0.537 | 1.077 | 0.103 | 1.086 |

In this table, we compare the changes in different accounting variables for firms that paid cash and firms that did not pay cash as compensation to the investor relations firms. We calculate free cash flow, market value, Tobin's Q, capital expenditure, leverage, log of assets, and sales during the fiscal year before the firm hired an investor relations firm. We collect these variables for the fiscal year after the firm hired an investor relations firm. We calculate the difference between these variables for each firm. Then we divide our data based on the fact that the firm paid cash as compensation or used securities to pay the investor relations firm. Then we compare these variables using a *t*-test. We also report the difference in means and standard errors (SE). *, **, and *** indicate a *p* value of 10%, 5%, and 1%, respectively.

5.3.3 Does Private Information Impact IR Payment Choice?

To examine the issue of reverse causality, Table 6 uses logit analysis to examine if *future* accounting variables (sales and operating income in the following year) impact the choice of payment (cash or stocks). We find that future sales are insignificant as a predictor in the cash/stock choice of payment of IR firms. The argument is that if the IR firm did have access to private inside information, and it used that private information to pick its method of payment, then we should see a relationship between the realized future firm performance and choice of cash or stock. In Table 6, we do not find a significant relationship between realized sales in the year after the contract and the means of payment cash/stock choice. In other words, the evidence in Table 6 is not consistent with the choice of the means of payment being a function of private information available to the IR firm before the contract is signed.

Table 6. Logistical probability of hiring an investor relations firm

| Variables | Model 1 | | Model 2 | | Model 3 | | Model 4 | | | | |
|---------------------------------|-------------|----------------|------------|-------------|----------------|------------|-------------|----------------|------------|-----------|--------|
| | Coefficient | Standard Error | Elasticity | Coefficient | Standard Error | Elasticity | Coefficient | Standard Error | Elasticity | | |
| Free Cash Flow | 0.0115 | 0.0113 | -0.0071 | | | | 0.0114 | 0.0111 | -0.0068 | | |
| Asset | 0.0713 | 0.1056 | 0.0224 | | | 0.0309 | 0.1095 | 0.0095 | 0.0118 | 0.1122 | 0.0036 |
| Tobin's Q | 0.0001 | 0.0033 | 0.0010 | | | -0.0001 | 0.0033 | -0.0019 | 0.0001 | 0.0033 | 0.0015 |
| Leverage | 0.0155 | 0.0523 | 0.0185 | | | 0.0157 | 0.0517 | 0.0185 | 0.0117 | 0.0521 | 0.0138 |
| Operating Income after One Year | 0.0345 | 0.0340 | -0.0487 | 0.0590 | 0.0736 | -0.0822 | | | | | |
| Average Operating Income | | | | -0.3455 | 0.4585 | 0.0762 | | | | | |
| Average Sales | | | | 0.2088 | 0.1362 | 1.4013 | | | 0.0199 | 0.0159 | 0.1309 |
| Sales after One Year | | | | -0.1745 | 0.1233 | -1.3266 | 0.0126 | 0.0135 | 0.0945 | | |
| Constant | -0.5363 | 0.2682*** | -0.6531 | 0.2719*** | | -0.6970 | 0.2538*** | | -0.7171 | 0.2560*** | |
| Number of Observations | 120 | | 120 | | | 120 | | | 120 | | |
| Wald χ^2 | 4.4 | | 7.8 | | | 3.46 | | | 5.48 | | |
| Pseudo R^2 | 0.0278 | | 0.0494 | | | 0.0219 | | | 0.0348 | | |
| Log Pseudo Likelihood | -77.1119 | | -74.9612 | | | -77.128 | | | -76.118 | | |

This table reports our panel logit results for the probability of firms paying cash based on the future performance. There are 120 firms in our sample with usable accounting data. The dependent variable is binary and takes a value of one for the firms paying cash to the investor relations firm and zero otherwise. The standard error (SE) is corrected for firm clustering, following Peterson (2006). The variable definitions are presented in Appendix 1. Elasticity is calculated as $d(\ln F)/d(\ln x)$, where d is the first derivative, $\ln(F)$ is the natural logarithm of the density function, and $\ln(x)$ is the natural logarithm of the explanatory variable and is evaluated at the sample means of the explanatory variables. We use free cash flow, assets, Tobin's Q, and leverage from the last fiscal year before the firm hired an investor relations specialist. Then we include a forward-looking variable that includes future value. For example, we include sales after the firm hired an investor relations specialist. We also include average sales during the fiscal year before and after the firm hired an investor relations specialist. *, **, and *** indicate a p value of 10%, 5%, and 1%, respectively.

The main implication of this finding is that private information is not a key determinant of the means of payment choice, and it implies that more weight should be put on the "payment in stock leads to an increased effort" argument. In other words, causality seems to run from payment in stock, leading to increased effort and thus increased client performance, rather than to reverse causality, which argued that private information about future client performance leads to payment in stock rather than in cash.

In Table 7 we provide evidence of the impact of our second measure of private information (the residual from the operating performance prediction equation) on the stock/cash choice. Consistent with the results reported in Table 6, we find that private information as measured by the residual from operating performance is not the reason investor relations firms are paid in stock. The private information content of the future sales is not significant in all the models. This again lends credence to the argument that investor relations firms put more effort into their activities when they are paid in stock.

Table 7. Logistical probability of paying cash to an investor relations firm

| Variables | Model 1 | | | Model 2 | | | Model 3 | | |
|------------------------|-------------|----------------|------------|-------------|----------------|------------|-------------|----------------|------------|
| | Coefficient | Standard Error | Elasticity | Coefficient | Standard Error | Elasticity | Coefficient | Standard Error | Elasticity |
| Residual Sales | -0.4188 | 0.2871 | -0.0020 | -0.4380 | 0.3111 | -0.0287 | -0.4050 | 0.2750 | -0.0020 |
| Free Cash Flow | 0.0199 | 0.0202 | -0.0170 | 0.0132 | 0.0220 | -0.0024 | 0.0207 | 0.0199 | -0.0177 |
| Capital Expenditure | -0.1415 | 2.1931 | -0.0061 | 0.3022 | 2.3282 | 0.0122 | -0.1852 | 2.1826 | -0.0080 |
| Leverage | 0.0143 | 0.0660 | 0.0166 | 0.0170 | 0.0701 | 0.0182 | 0.0103 | 0.0634 | 0.0119 |
| Asset | 0.0328 | 0.1543 | 0.0173 | | | | | | |
| Research & Development | -0.0351 | 0.0499 | -0.0380 | -0.0182 | 0.0568 | -0.0152 | -0.0347 | 0.0499 | -0.0376 |
| Tobin's Q | -0.0170 | 0.0502 | -0.0673 | -0.0406 | 0.0583 | -0.1728 | -0.0200 | 0.0482 | -0.0789 |
| Market Value | | | | -0.0595 | 0.1836 | -0.0943 | | | |
| Constant | -0.2820 | 0.5169 | | 0.1187 | 0.6177 | | -0.2181 | 0.4200 | |
| Number of Observations | 92 | | | 92 | | | 92 | | |
| Wald χ^2 | 6.67 | | | 5.58 | | | 6.63 | | |
| Pseudo R^2 | 0.0569 | | | 0.0555 | | | 0.0565 | | |
| Log Pseudo Likelihood | -55.2949 | | | -47.5254 | | | -55.3176 | | |

This table reports our panel logit results for the probability of firms paying cash based on the future performance. There are 120 firms in our sample with usable accounting data. The dependent variable is binary and takes a value of one for the firms paying cash to the investor relations firm and zero otherwise. The standard error (SE) is corrected for firm clustering, following Peterson (2006). The variable definitions are presented in Appendix 1. *, **, and *** indicate a p value of 10%, 5%, and 1%, respectively. Elasticity is calculated as $d(\ln F)/d(\ln x)$, where d is the first derivative, $\ln(F)$ is the natural logarithm of the density function, and $\ln(x)$ is the natural logarithm of the explanatory variable and is evaluated at the sample means of the explanatory variables. We use the log of assets, log of market value, free cash flow, capital expenditure, research and development expenditure standardized by sales, Tobin's Q, and leverage from the last fiscal year before the firm hired an investor relations specialist. We also include residual sales as a measure of access to private information. We run the following regression to calculate the residual sales:

$$Sales_{t+1} = Sales_t + Average\ Industry\ Sales_t + Macro\ Economic\ Variables_t + \epsilon_t$$

6. Conclusions and Discussion

This paper examines two hypotheses concerning investor relations (IR) firms. Our first hypothesis examines whether entrenched managers are less likely to hire IR firms. Possible reasons for this are that the compensation of entrenched managers is less likely to be attached to stock market performance and also that entrenched managers will be more reluctant to face the increased monitoring and information disclosure that accompanies IR firm activities. Following the literature on entrenchment, we define entrenched managers as owning between 5% and 30% of the outstanding equity. Our data are consistent with the hypothesis that entrenched managers are less likely to hire IR firms.

Our second hypothesis is that there will be a relationship between the means of payment of IR forms (cash or stock) and the future performance of the client firm. This is the first paper that looks at the difference in performance of the firms that pay cash to investor relations firms compared with firms that pay noncash securities (shares, restricted shares, warrants, and options). We find that the firms that pay noncash securities to the investor relations specialists experience higher market returns and lower return volatility. We also find that these firms increase their asset size and lower leverage after hiring investor relations firms. Overall, our results support the hypothesis that IR firms paid in stock perform better in terms of market and operational variables after hiring investor relations' specialists.

Our paper has important implications for investors and managers. Our results show that entrenched managers are less likely to hire an investor relations firm. They are afraid of the increased scrutiny that comes from more disclosure through an investor relations firm. Investors, therefore, can coerce managers through board of directors to hire investor relations firms and provide them with more disclosure quality about the governance of these firms (compensation, succession policy, etc.).

Hiring an investor relations firm can also help managers, while working in the best interests of their shareholders, to provide a credible signal to the shareholders. Disclosure about financial performance and management quality provided through an investor relations firm can help these managers attract a more diverse investor base.

Our second finding has also implications for the managers of firms. In a corporate governance framework, aligning the interests of shareholders and managers through equity incentives has been investigated by a number of researchers. Frydman and Jenter (2010) provide an excellent survey of the existing literature. We investigate the relationship between the equity incentives of investor relations firms and the subsequent performance of these firms. We find that firms that pay investor relations firms noncash payments are subsequently more likely to experience better returns and lower return volatility. Our findings suggest that managers should design their contracts with investor relations specialists so that the interests of the firm are aligned with those of the specialists. One way of doing this is to award noncash compensation to these specialists. This could lead to better effort by IR firms and more liquidity, better stock returns, and lower return volatility for the client firms.

Our study has its limitations. We believe that future research can extend our results by looking at the role of executive compensation in hiring an IR firm. Similarly, the role of different corporate governance variables in determining the decision to hire an IR firm can also be explored.

References

- Adams, R. B., & Santos, J. A. C. (2006). Identifying the effect of managerial control on firm performance. *Journal of Accounting and Economics*, 41(1-2), 55-85. <http://dx.doi.org/10.1016/j.jacceco.2005.08.001>
- Balakrishnan, K., Billings, M. B., Kelly, B., & Ljungqvist, A. (2014). Shaping liquidity: On the causal effects of voluntary disclosure. *The Journal of Finance*, 69(5), 2237-2278. <http://dx.doi.org/10.1111/jofi.12180>
- Bergman, N., & RoyChowdhury, S. (2008). Investor Sentiment and Corporate Disclosure. *Journal of Accounting Research*, 46(5), 1057-1083. <http://dx.doi.org/10.1111/j.1475-679x.2008.00305.x>
- Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *The Accounting Review*, 72(3), 323-349.
- Brickley, J. A., Lease, R. C., & Smith, C. W. (1988). Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics*, 20, 267-291. [http://dx.doi.org/10.1016/0304-405X\(88\)90047-5](http://dx.doi.org/10.1016/0304-405X(88)90047-5)
- Bushee, B. J., & Miller, G. S. (2012). Investor relations, firm visibility, and investor following. *The Accounting Review*, 87(3), 867-897. <http://dx.doi.org/10.2308/accr-10211>
- Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics*, 32(1), 237-333. [http://dx.doi.org/10.1016/S0165-4101\(01\)00027-1](http://dx.doi.org/10.1016/S0165-4101(01)00027-1)
- Bushman, R. M., & Smith, A. J. (2003). Transparency, financial accounting information, and corporate governance. Financial Accounting Information, and Corporate Governance. *Economic Policy Review*, 9(1).
- Callen, J. L., Robb, S., & Segal, D. (2005). Revenue Manipulation and Restatements by Loss Firms. *Auditing: A Journal of Practice and Theory*.
- Chang, M., Hooi, L., & Wee, M. (2014). How does investor relations disclosure affect analysts' forecasts? *Accounting & Finance*, 54(2), 365-391. <http://dx.doi.org/10.1111/acfi.12046>
- Chemmanur, T., & Paeglis, I. (2005). Management quality, certification, and initial public offering. *Journal of Financial Economics*, 76(2), 331-368. <http://dx.doi.org/10.1016/j.jfineco.2004.10.001>
- Diamond, D. W., & Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. *The Journal of Finance*, 46(4), 1325-1359. <http://dx.doi.org/10.1111/j.1540-6261.1991.tb04620.x>
- Edlin, A. S., & Stiglitz, J. E. (1995). Discouraging Rivals: Managerial Rent-Seeking and Economic Inefficiencies. *The American Economic Review*, 85(5), 1301-1312.
- Frydman, C., & Jenter, K. (2010). CEO Compensation. *Annual Review of Financial Economics, Annual Reviews*, 2(1), 75-102. <http://dx.doi.org/10.1146/annurev-financial-120209-133958>
- Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1-3), 405-440. [http://dx.doi.org/10.1016/S0165-4101\(01\)00018-0](http://dx.doi.org/10.1016/S0165-4101(01)00018-0)
- Hermalin, B. E., & Weisbach, M. S. (1991). The effects of board composition and direct incentives on firm performance. *Financial Management*, 20(4), 101-112. <http://dx.doi.org/10.2307/3665716>
- Hoffmann, C., & Fieseler, C. (2012). Investor relations beyond financials: Non-financial factors and capital market image building. *Corporate Communications: An International Journal*, 17(2), 138-155. <http://dx.doi.org/10.1108/13563281211220265>
- Hong, H., & Huang, M. (2005). Talking up liquidity: Insider trading and investor relations. *Journal of Financial*

- Intermediation*, 14(1), 1-31. <http://dx.doi.org/10.1016/j.jfi.2003.08.004>
- Jensen, M. C. (1978). Some anomalous evidence regarding market efficiency. *Journal of Financial Economics*, 6(2-3), 95-101. [http://dx.doi.org/10.1016/0304-405X\(78\)90025-9](http://dx.doi.org/10.1016/0304-405X(78)90025-9)
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [http://dx.doi.org/10.1016/0304-405X\(76\)90026-X](http://dx.doi.org/10.1016/0304-405X(76)90026-X)
- Jo, H., & Kim, Y. (2007). Disclosure frequency and earnings management. *Journal of Financial Economics*, 84(2), 561-590. <http://dx.doi.org/10.1016/j.jfineco.2006.03.007>
- Kang, Q., & Liu, Q. (2008). Stock trading, information production, and executive incentives. *Journal of Corporate Finance*, 14(4), 484-498. <http://dx.doi.org/10.1016/j.jcorpfin.2008.06.003>
- Kirk, M. P., & Vincent, J. D. (2014). Professional investor relations within the firm. *The Accounting Review*, 89(4), 1421-1452. <http://dx.doi.org/10.2308/accr-50724>
- McCahery, J. A., Sautner, Z., & Starks, L. T. (2016). Behind the Scenes: The Corporate Governance Preferences of Institutional Investors. *The Journal of Finance*. [http://dx.doi.org/10.1016/0304-405X\(90\)90069-C](http://dx.doi.org/10.1016/0304-405X(90)90069-C)
- McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27(2), 595-612. [http://dx.doi.org/10.1016/0304-405X\(95\)00824-X](http://dx.doi.org/10.1016/0304-405X(95)00824-X)
- McConnell, J. J., & Servaes, H. (1995). Equity ownership and the two faces of debt. *Journal of Financial Economics*, 39(1), 131-157. <http://dx.doi.org/10.1016/j.jcorpfin.2008.02.001>
- McConnell, J. J., Servaes, H., & Lins, K. V. (2008). Changes in insider ownership and changes in the market value of the firm. *Journal of Corporate Finance*, 14(2), 92-106.
- Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, 20, 293-315. [http://dx.doi.org/10.1016/0304-405X\(88\)90048-7](http://dx.doi.org/10.1016/0304-405X(88)90048-7)
- Rao, H., & Sivakumar, K. (1999). Institutional sources of boundary-spanning structures: The establishment of investor relations departments in the Fortune 500 industrials. *Organization Science*, 10(1), 27-42. <http://dx.doi.org/10.1287/orsc.10.1.27>

Notes

Note 1. The National Investor Relations Institute (NIRI) defines investor relations as “a strategic management responsibility that integrates finance, communication, marketing and securities law compliance to enable the most effective two-way communication between a company, the financial community, and other constituencies, which ultimately contributes to a company’s securities achieving fair valuation.” Retrieved from <http://www.niri.org/about-niri>

Note 2. Very large firms usually have investor relations departments, typically headed by a vice president. The first company to establish an investor relations department was General Electric. Its Chairman, Ralph Cordinar, established a new department in 1953 and coined the term investor relations. Retrieved from <http://www.niir.org>

Note 3. In this paper we closely follow this literature in empirically defining managerial entrenchment as being high, low, or moderate. For robustness purposes, we consider a variety of cutoff points (e.g., either 4% or 5% for the cutoff between low and moderate insider ownership and either 25% or 30% for the cutoff between moderate and high levels of insider ownership).

Note 4. Demsetz (1983) contends that insider ownership and market value might be result of external market forces. These forces, in turn, determine the optimal level of insider ownership and the value of the firm. Thus, Morck, Shleifer, and Vishny (1987) blame endogeneity. To overcome the endogeneity problem, McConnell, Servaes and Lins (2008) look at changes in insider ownership and the value of the firm. Consistent with Morck, Shleifer, and Vishny (1987) and McConnell Servaes (1990), they find a curvilinear relationship between insider ownership and the value of the firm.

Note 5. There were no borderline cases. Firms either paid most of the compensation in cash or in the form of shares.

Table A1. Variable definitions

| Variable Name | Description |
|-----------------------------|---|
| Tobin's Q | Tobin's Q was measured as the market value of assets, divided by the book value of the assets. The market value of the assets is equal to the book value of the assets, plus the market value of the common equity (measured at year end), less the sum of the book value of the common equity and balance sheet-deferred taxes. Tobin's Q was measured for the fiscal year prior to the event date (Masulis et al. (2007)). |
| Log(Assets) | The logarithm of the firm's asset value. |
| Change in Sales | Changes in sales (Compustat #data12) from one year after hiring an investor relations firm from one year before hiring it. |
| Leverage | Total debt (long and short-term debt), divided by total assets. |
| Free Cash Flow Ratio | Free cash flow, divided by the book value of common equity, where free cash flow is measured by subtracting total income taxes (Compustat #16 minus change in deferred taxes Compustat#35), interest expenses (Compustat#15), preferred and common dividends (Compustat#19 & 21) from operating income before depreciation (Compustat#13). All Compustat items were collected for the fiscal year prior to the event date (Lehn et al. (1989)). |
| Capital Expenditure | Capital expenditure, divided by sales as a measure of the growth of a firm. Both capital expenditure and sales were collected for the fiscal year prior to the event date. |
| R&D Expenditure | Research and development expenditures standardized by sales. |
| Turnover | Turnover is the number of shares of the firm traded on a particular date, divided by the average number of shares outstanding during the quarter. |
| Volume | The number of shares of the firm trading on a particular day. We use average daily volume during the quarter before (and after) the firm hired an investor relations specialist. |
| Number of Trading Days | The number of trading days is the count that describes the number of days a firm's stock was active during the quarter before (and after) the firm hired an investor relations specialist. |
| Buy and Hold Return | We generate buy and hold returns by compounding daily returns beginning at the start of quarter before (and after) the firm hired an investor relations specialist. |
| Average Daily Returns | We take the average of daily returns the quarter before (and after) the firm hired an investor relations specialist. |
| Volatility of Daily Returns | We calculate the standard deviation of daily returns during the quarter before (and after) the firm hired an investor relations specialist. |

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