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## **Economic Consequences of Announcing Strategic Alternatives**

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2016

Online at <https://mpra.ub.uni-muenchen.de/81356/>

MPRA Paper No. 81356, posted 14 September 2017 14:00 UTC

## Economic Consequences of Announcing Strategic Alternatives

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This version: September 10, 2017

This paper documents the consequences of publicly announcing “strategic alternatives,” whereby the company reveals its decision to explore a potential sale or merger. The inherent uncertainty in *ex-post* transactional outcomes (i.e., whether the firm is sold, liquidated, or remains independent) allows me to identify positive and negative consequences differentially accruing to these subsamples. The public announcement of strategic alternatives is associated with *excess* takeover-related gains for firms that are subsequently acquired but *abnormally* negative returns for firms that are not subsequently sold. Tests of potential mechanisms are consistent with the public announcement generating greater investor attention and leading to a more informed M&A sale process that maximizes value for successful targets’ shareholders, while also being a costly admission of business problems that alienates company stakeholders and wears on operations. These consequences that are ultimately related to firm value underscore the varied costs and benefits managers should weigh when making this disruptive disclosure decision.

Keywords: corporate disclosure; strategic alternatives; mergers and acquisitions; economic consequences; disclosure costs; disclosure benefits; information transmission; shareholder value.

JEL Classifications: D82, D84, G14, G34, M41.

Data Availability: Data are publicly available from sources identified in the article.

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This paper is based on my dissertation entitled, “Voluntary Disclosure of Strategic Alternatives: A Cost-Benefit Analysis.” I am grateful for invaluable guidance from Richard Sloan (Chair), Michael Anderson, Patricia Dechow, Sunil Dutta, Alastair Lawrence and Panos Patatoukas. I also thank Bill Baber, Amanda Beck, John Hand, Sok-Hyon Kang, Yaniv Konchitchki, Eva Labro, Henry Laurion, Alexander Nezlobin, Oded Rozenbaum, Samuel Tan, Gwen Yu, Jean Zeng and seminar participants at Berkeley, UIC, UNC, Duke, Harvard, Texas, Colorado, GWU, USC, Fordham, and Georgetown for their helpful comments. I thank Allen Ding, Peter Michelson, Carling O’Brien, Philip O’Brien, and others for sharing their practitioner insights. I gratefully acknowledge financial support from the Haas School of Business and the Deloitte Foundation. I refer readers interested in the antecedent characteristics of firms that undertake strategic alternatives to a related paper, “Why Do Firms Sell Out? Separating Targets’ Motives from Bidders’ Selection of Targets in M&A.”

## 1. Introduction

Seeking “strategic alternatives” is a common euphemism for exploring the potential sale or merger of the company. Whether to pursue strategic alternatives is one of the most disruptive corporate decisions a company faces in its lifetime, putting the company’s future existence at stake. Moreover, whether to publicly announce strategic alternatives is a disruptive disclosure decision that impacts investor attention, the subsequent M&A process, future firm operations, and ultimately, shareholder value. Despite the economically significant impact of this disclosure on an otherwise opaque M&A market shrouded with non-disclosure agreements, uncertainty, and information asymmetry, there does not appear to be extant literature exploring the costs and benefits arising from announcing strategic alternatives.<sup>1</sup>

A *potential* target firm that is evaluating strategic alternatives must decide whether to publicly announce its pursuit or keep silent and shop itself privately.<sup>2</sup> Evaluating strategic alternatives does not constitute a mandatorily reportable event under the SEC’s Form 8-K disclosure requirements,<sup>3</sup> because seeking strategic alternatives does not mean a sale is necessarily imminent. Voluntarily disclosing a sale is a gray area in practice, where the U.S. Supreme Court has stated that the obligation to disclose depends on the materiality of the news and the probability of the transaction occurring (Bruner, 2004, p.693). This leaves enormous discretion to the firm in ascertaining at a preliminary stage whether it should publicly announce it is seeking strategic alternatives. A public announcement, if made, is an influential news item, prompting reaction from investors, M&A market players, and other firm stakeholders. An announcement that informs all current and potential future stakeholders that the company is attempting to sell itself contains far-reaching news that could impact the firm’s information environment and M&A sale process, and disrupt relationships with key stakeholders. The net positive or net negative consequences are ultimately reflected in firm value. The findings of this paper are consistent with this characterization.

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<sup>1</sup> Boone and Mulherin (2007; 2009) mention the announcement of strategic alternatives as part of the sale process, but do not conduct any empirical tests related to it.

<sup>2</sup> A company typically initiates the exploration of strategic alternatives before receiving an offer, but it may also explore strategic alternatives after receiving an offer to “shop itself” for a better offer.

<sup>3</sup> Requirement Item 8.01 calls for other events not explicitly required to be the subject of voluntary disclosure if the issuer deems it important.

There are several reasons why a study on the effects of this economically significant and unique announcement can provide innovative insights. First, this disclosure decision afflicts a fundamentally different set of firms that face drastic operational and competitive pressures during a transformative time. Second, in an M&A setting, information about which firms are “in play” is valuable to investors, potential acquirers, and other company stakeholders; thus, the consequences of this announcement are likely to be economically meaningful and widespread. Third, due to this announcement’s non-periodicity (unlike management forecasts and earnings conference calls), it is unlikely to be encumbered by a previously-established disclosure policy and repeated game considerations. Empirically, a one-off event makes for a cleaner observational study of its consequences. Fourth, a unique advantage of this setting is the inherent uncertainty in eventual outcomes after firms announce strategic alternatives; stratifying observations into those that are acquired, receive bid(s), are liquidated or bankrupted, or remain independent allows me to observe consequences differentially accruing to these *ex-post* subsamples.

Estimating the announcement’s impact on future changes in firm value, information environment, and firm operations necessitates the comparison between the potential outcomes of the announcement group and a control group. Firms that announce strategic alternatives have self-selected to seek strategic alternatives and to announce it, resulting in non-random assignment to the treatment group. Therefore, I construct a control group starting from peer observations from the same industry-years, which have similar firm fundamentals, growth prospects, market risk, prior stock performance, managerial ability, and ownership attributes. The control group that I use in my analyses is statistically indistinguishable, *ex-ante*, from the announcement group along multiple dimensions (Rubin, 2008; Hainmueller, 2012; Hainmueller and Xu, 2013). Furthermore, the control group has a statistically indistinguishable estimated propensity to seek strategic alternatives and announce it. This control group, by construction, satisfies the assumption of ignorable treatment assignment and provides confidence that that the announcement (and its public news content) is the only statistically significant partitioning variable.<sup>4</sup>

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<sup>4</sup> If one assumes close substitutability of the treatment and control units (also known as ignorable treatment assignment) and stable unit treatment value (SUTVA), then the observed differences in potential outcomes between the

This study investigates *whether* and *how* announcements of strategic alternatives impact firms and their stakeholders, using 1,006 observations of firms announcing strategic alternatives from 1990 to 2014. These announcements often claim to “maximize shareholder value,” and the three-day announcement returns average +6 percent. Yet, the association between the announcement and long-run shareholder value is nuanced. I find that whether the announcement’s association with long-run returns is positive or negative depends on the *ex-post* transactional outcome. The association between announcing strategic alternatives and long-run returns is consistent with benefits and costs differentially accruing to certain subsamples.

On the benefits of disclosure, the announcement of strategic alternatives leads to *excess* takeover-related gains, but only for the subsequently acquired firms. While shareholders of acquired firms generally receive takeover premia, the returns are estimated to be *even higher* by +5 to +9 percent for the firms that preemptively announced strategic alternatives compared to the peer control firms that were also acquired.

The finding of excess takeover-related gains then call into question the sustained credibility of these disclosures in equilibrium: if announcing strategic alternatives is associated with excess gains, then should all firms with even a remote chance of getting acquired announce that they are seeking strategic alternatives? The answer is no. As shown in the theoretical model, a threshold equilibrium obtains because these disclosures are costly to firm value. Empirically, I find evidence of disclosure costs that impact firm value. Firms that announce strategic alternatives but are not acquired experience *abnormal* negative long-run returns. They experience returns that are -14 to -15 percent lower than that of the peer control firms that are also not subsequently acquired. This empirically detectable valuation cost appears to keep the disclosures credible. Taken together, the valuation costs and benefits indicate that a firm’s announcement of strategic alternatives can make a nontrivial impact on its value.

Next, I document *how* public knowledge of a firm’s review of strategic alternatives could ultimately (positively or negatively) impact shareholder value by examining several potential mechanisms. Consistent

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announcement group and control group estimate the “average treatment effect on the treated” (ATET). If the reader is not persuaded that these assumptions for causal inference are satisfied, then at the very least, this paper documents an unconfounded association between announcing strategic alternatives and future events.

with corporate disclosures improving firms' information environment, I find that strategic alternatives announcements lead to greater investor attention and information acquisition, proxied by future abnormal downloads of SEC filings on EDGAR. Also, announcements are associated with a higher number of bidders in the final round of the M&A process for the subset of firms that receive bids. The benefit of the announcement appears consistent with public news affecting the actions of market participants, which can lead to a better information environment, M&A sale process, and ultimately, shareholder value—if the firm is successfully acquired and the benefit is captured.

However, there appear to be far-reaching costs to releasing the information publicly that can wear on firm operations. This is consistent with the theoretical argument that credible disclosures that attempt to maximize firm value must be costly. The public admission of business problems inferred from the announcement appears to lead to operational dysfunction by alienating stakeholders such as customers and employees. Specifically, I find that future changes in revenues, operating income, and employee growth are abnormally lower following the announcement. These consequences could materialize into firm value and cause the future stock price to slide if the firm is not acquired.

This paper provides novel evidence on the real effects of a unique corporate disclosure. Evidence of the positive and negative consequences following strategic alternatives announcements advances our understanding about how an important M&A-related announcement can have meaningful effects on the M&A process, information environment, and firm operations, whether to the benefit or detriment of shareholder value. Economically significant costs and benefits, together, underscore the importance of this managerial decision, because without one or the other, either all firms or no firms would disclose their strategic pursuits. This paper aims to convey the economic magnitude of this tradeoff between potential positive and negative consequences and what entails this tradeoff.

This knowledge could be useful to internal parties such as managers and directors who face this announcement decision, their financial and legal advisors, and investor relations personnel, and to external parties such as market participants, potential acquirers, activist investors who push for the sale of companies, and hedge funds that use event-driven or merger-arbitrage strategies. Advocates of making this

announcement may be interested in casting a wider net to potential acquirers to capture a higher takeover premium. Yet, they should also be aware of the dysfunctional problems that may follow a public announcement of strategic alternatives. A former M&A lawyer writes, “As a company, you're not really supposed to say, ‘We're trying to sell ourselves,’ because if you don't find a buyer then you look a bit desperate. But you can say, ‘We're exploring strategic alternatives,’ which means the same thing, because if you end up not finding a buyer you can conclude that your exploration of strategic alternatives led you back home, to the strategy that was right there with you all along.”<sup>5</sup> Yet, this prior belief held by practitioners should be changed based on the evidence in this study. In addition, some firms include a prototypical disclaimer at the end of the announcement, such as, “there can be no assurance that the Company's review of strategic alternatives will result in any transaction. The Company does not intend to make further public comment regarding these matters during the strategic review and exploration process.” Although managers and their counsel believe they are mitigating the negative consequences with certain practices if a firm discloses strategic alternatives but fails to sell itself, the results of this paper suggest that announcing firms that remain independent still experience significant negative consequences on average. It is important for all parties to better understand the potential outcomes after announcing strategic alternatives, since it affects future stock returns, the M&A sale process, and firm operations.

The rest of the paper is organized as follows. Section 2 provides a literature review and institutional background. Section 3 presents a theoretical model and develops the three hypotheses. Section 4 describes the data. Section 5 describes the research design and presents the results. Section 6 concludes.

## **2. Background**

### *2.1 Prior literature*

This paper contributes to the literature on corporate information's real effects on capital markets (Tetlock, 2014). A public announcement of strategic alternatives can impact the stock market and market for corporate control by not only disseminating the information more broadly than other sources but also by

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<sup>5</sup> Matthew Levine. Bloomberg View. October 7, 2014. Accessed at: <http://www.bloomberg.com/view/articles/2014-10-07/allergan-is-open-to-alternatives-that-aren-t-valeant>.

providing new information to market participants. There is an existing literature studying corporate disclosures in the M&A setting. However, these prior studies almost exclusively focus on the bidders' disclosures.<sup>6</sup> Only one paper to my knowledge has examined voluntary disclosures in M&A by the selling firm (Brennan, 1999). Specifically, Brennan studies earnings forecasts by targets in the UK and finds that forecasts are more likely when a takeover bid is hostile or a competing offer, the target is large, and blockholders are present. In addition, Brennan finds that targets' forecasts tend to contain good news (68%) and are associated with the offer price being increased, although not associated with the success of the bid. Similarly, this paper focuses on an announcement made by the selling firm.

Another literature studies the association between various target firms characteristics and takeover premia. Aktas, De Bodt, and Roll (2010) examine a large sample of completed one-on-one M&A negotiations and conclude that the target's willingness to sell, proxied by either target initiation of the deal or firm leverage, weakens its bargaining power and is negatively associated with takeover premium. De Bodt, Cousin, and Demidova (2014) find that target firms that initiate the transaction or choose a formal auction process receive lower bid premia. The results of these two studies are based on the association between self-selected firm characteristics and takeover premia: target firms with high leverage and that are desperate for a sale receive lower takeover premia compared to healthier, non-desperate target firms.<sup>7</sup> In contrast, my study attempts to control for self-selection so that desperate, poorly performing firms that announce strategic alternatives are compared to control firms that are equally desperate and poorly-performing. To the extent that there is truly a negative effect (not association) of willingness-to-sell on takeover price, then my finding of the announcement's benefit on *ex-post* target firm value would be understated.

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<sup>6</sup> Studies of acquirers' disclosure decisions include Ge and Lennox (2011); Kimbrough and Louis (2011); Ahern and Sosyura (2014); Goodman, Neamtiu, Shroff and White (2014); and Amel-Zadeh and Meeks (2015).

<sup>7</sup> A sample of completed target-initiated deals is not the same as a sample of firms seeking and announcing strategic alternatives. Aktas et al.'s (2010) sample only includes one-to-one negotiations that were successful; they do not observe sale attempts that failed to receive a bid or when bids fell through. De Bodt et al. (2014) use a sample of negotiations and auctions where only 5 percent of their sample are failed deals. They also do not observe firms that were willing to sell themselves but did not receive a bid.



In the voluntary disclosure literature, studies associate the disclosure event, its content, or its frequency with either a cost or a benefit, but not both. For example, voluntary disclosure is associated with lower cost of capital (Botosan, 1997; Brown, Hillegeist and Lo, 2004; Francis, Nanda and Olsson, 2008) or lower relative bid-ask spreads (Healy, Hutton and Palepu, 1999), but the studies implicitly assume, rather than provide empirical evidence of, disclosure costs that are significant enough to prevent a full unravelling of voluntary disclosure.<sup>8</sup> Analytical studies come to mixed conclusions about the relation between disclosure and the cost of capital and liquidity (Diamond and Verrecchia, 1991; Gao, 2010), and empirical studies find mixed associations between disclosure and cost of capital (Botosan, 1997; Brown et al., 2004; Francis et al., 2008; Clinch and Verrecchia, 2015). Moreover, these papers do not conclude whether disclosure ultimately maximizes firm value. Few papers have documented a direct relationship between disclosure and firm value; this is notwithstanding that the main theory underlying corporate voluntary disclosures assumes that the firm's objective function is to maximize firm value (Verrecchia, 1983; Jung and Kwon, 1988). Two studies that directly examine firm value are Healy, Hutton, and Palepu (1999), who show that firms that expand disclosure experience more positive industry-adjusted returns in the contemporaneous and following year, compared to their peers, and Lang and Lundholm (2000), who show that in the setting of seasoned equity offerings, firms increase pre-offering voluntary disclosures to maximize firm value in the short term, to the detriment of lower firm value in the long term.

Likewise, in this paper, I view shareholder value, or price, as the overarching summary variable that will incorporate all costs and benefits to the firm, whether directly or indirectly, and whether through the numerator (i.e., estimated future cash flows) or denominator (i.e., discount rate). This study is set apart from prior studies because, unlike other types of voluntary disclosure, strategic alternatives announcements are isolated, non-periodic events, making for cleaner tests of relations with future value. Lastly, the purpose of these announcements is specifically aimed at providing information about M&A potential and maximizing shareholder value.

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<sup>8</sup> The unravelling result (e.g., Grossman, 1981) states that in the absence of disclosure frictions or costs, all firms would voluntarily disclose.

## *2.2 Institutional background and motivation*

Because not much research has addressed the preliminary M&A sale process, I provide some institutional background about the strategic alternatives timeline and about the announcement itself. Typically, during a strategic alternatives evaluation, the managers and directors of the potential selling firm assess the transactional landscape with their financial advisors and evaluate whether any parties would have an interest in acquiring the company, and if so, at what price and on what terms.<sup>9</sup> Value and liquidity is sought through a sale or merger if the company faces challenges continuing as a stand-alone entity. Once the board of directors officially approves the pursuit of strategic alternatives, the managers, directors, and financial advisors develop a preliminary valuation for the company, assess the various alternatives, approach potential suitors with “teasers” and confidential pitch books, and hold management meetings and presentations. This amorphous pre-sale process is unobservable to the public since the distinct intention to start crafting a deal can be difficult to pinpoint due to ongoing relationships and communications between executives, directors, and bankers. During this time, some firms publicly announce that they are evaluating strategic alternatives through a press release or 8-K filing. Interested bidders sign confidentiality agreements, review the seller’s materials (including the confidential information memorandum, financial projections, and management presentation), and submit initial indications of interest. A select group of bidders may continue to additional rounds of due diligence with access to data rooms, more serious negotiations, or an auction. If a buyer and an agreement emerge, then the parties sign a letter of intent, obtain regulatory and shareholder approval, and prepare the definitive agreement.<sup>10</sup>

The information environment surrounding the M&A sale process is laden with uncertainty and imperfect and asymmetric information between potential target firms and potential buyers. Although information about firm value becomes available to potential suitors over the course of the sale process (i.e., during multiple rounds of due diligence), there is initially much information asymmetry about the potential

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<sup>9</sup> Sales and business combinations are the most prominent and favored alternatives. Less common alternatives include spin-offs, joint ventures, restructuring, refinancing or recapitalization.

<sup>10</sup> For stock-financed transactions, the acquirer would then register for additional securities by filing a Form S-4 Registration Statement with the SEC.

target firm, including the fundamental issue of whether the firm is “in play.” In addition to relying on public information, potential bidders expend considerable resources to gather private information about what firms are “in play,” so there is an important role for public announcements of strategic alternatives to bridge this initial information gap. This announcement is typically the first and only M&A-related disclosure by the company other than the mandatory announcement of a bid.

Regardless of whether any potential suitor has already been identified, whether any preliminary discussion has already occurred, or whether any correspondence is bidder- or target- initiated, a firm will unequivocally evaluate strategic alternatives at the onset of any formal process to sell itself. Reviews of strategic alternatives leave open the possibility of remaining independent as the chosen alternative, if no sale occurs. The announcement often states that there is no set timetable for the strategic review process and that there can be no assurance that any transaction will be undertaken.

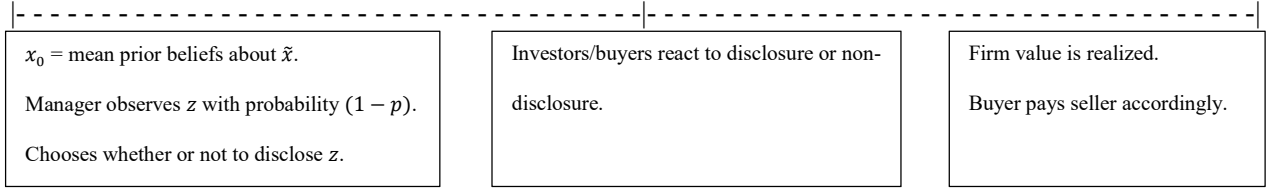
According to interviews with M&A practitioners, reasons for announcing are: to signal the firm’s availability and higher prospects for a sale or merger, be transparent and inform investors, communicate a commitment by the board of directors to maximize shareholder value through M&A, control the information environment during the sale process by preempting or addressing rumors and speculation, quell shareholder activists, and cast a wider net to potential bidders for a higher likelihood of acquisition and a higher acquisition premium. Alternatively, some practitioners express a strong preference for keeping the M&A sale process private, going to the extent to use code names to refer to potential deals.

### **3. Model and Hypotheses Development**

#### *3.1 Theoretical model*

This model motivates the importance of disclosure costs and M&A-specific disclosure benefits in managers’ decisions to announce strategic alternatives. I tailor the conventional voluntary disclosure framework to my setting of strategic alternatives, where disclosure can create real value through M&A by getting a better offer, i.e., valuation premium. As in extant models, the sell-side manager’s objective function is to maximize value when faced with a binary disclosure choice. There are two parties, sellers and

buyers (or investors) of an asset which is an entire firm. Market participants have risk neutral preferences and a zero discount rate. Buyers' probabilistic beliefs about silent sellers' types are correct.



At the beginning of the model, all market participants share a common prior belief regarding the value of the firm,  $\tilde{x}$ , which is normally distributed. The prior beliefs are represented by a probability density function  $f(\tilde{x})$  with mean  $x_0$ .  $f(\tilde{x}) > 0$  for all  $\tilde{x} \in [-\infty, +\infty]$ .  $F(\tilde{x})$  is the cumulative distribution function (cdf) of  $f$ .

With probability  $(1 - p)$ , the manager may be endowed with a private signal concerning the true value of the firm,  $z \equiv x + \varepsilon$ , where  $\varepsilon \sim N(0, \sigma_\varepsilon^2)$ . This signal could result from a valuation exercise undertaken by financial advisors or the board of directors. If the manager receives a private signal  $z$  and discloses  $z$ , let  $c$  = disclosure cost, which is a constant. Following disclosure, the price of the firm adjusts to  $\mu$ , the posterior mean of  $\tilde{x}$  given  $z$ , which is a convex combination of signal  $z$  and the prior mean  $x_0$  of  $\tilde{x}$ :

$$\mu \equiv E[\tilde{x}|z] = \frac{\sigma_\varepsilon^2}{\sigma_x^2 + \sigma_\varepsilon^2} z + \frac{\sigma_x^2}{\sigma_x^2 + \sigma_\varepsilon^2} x_0$$

If  $\mu = E[\tilde{x}|z] < 0$ , then no disclosure would occur; hence, this case is ignored.

Observing the disclosure of  $z$ , the ultimate acquirer/buyer of type  $k$  would be willing to pay  $E[\tilde{x}|z]E[m_k] = \mu E[m_k]$ .  $m_k$  is a valuation multiple offered by the ultimate buyer, which is always greater than or equal to 1. For example,  $m = 1$  means that the buyer values the seller's assets-in-place at their current stand-alone value, whereas  $m > 1$  means that the buyer will have higher productivity with the seller's assets.  $E[m_k] > 1$  may reflect unbiased or unbiased estimates of gains from a takeover. I denote  $E[m_k] = \bar{m}_k$  as the rationally expected valuation multiple given disclosure. If the seller expects to sell the firm for  $\bar{m}_k$ , then the seller's expected payoff with voluntary disclosure equals:

$$E[\tilde{x}|D] = \mu \bar{m}_k - c. \tag{1}$$

After observing disclosure or non-disclosure, investors correctly perceive the following mutually exclusive scenarios (Jung and Kwon, 1988): (i) no private signal is received by the director and hence no disclosure, with probability  $p$ ; (ii) a private signal is received but not disclosed, with probability  $(1 - p)F(y)$ , where  $y$  is some threshold of disclosure  $y \in [\underline{x}, \bar{x}]$ , such that an information signal below  $y$  is unfavorable, and  $F(y) = \Pr(\tilde{z} < y) = \int_{-\infty}^y dF(\tilde{z})$ ; or (iii) a private signal is received and disclosed, with probability  $(1 - p)(1 - F(y))$ .

If an informed director receives a signal that leads to an unfavorable posterior belief about  $x$  (i.e.,  $\mu < y$ ), he mimics uninformed directors, and hides behind non-disclosure behavior. Non-disclosing sellers are comprised of sellers who do not have private information and sellers who withhold information due to unfavorable private information or high disclosure costs. As in Verrecchia (1983), directors will not disclose if their payoff with non-disclosure is higher than their payoff with disclosure, if  $\mu E[m_k] - c \leq E[\tilde{x}|ND]$ , or in other words, if disclosure costs are prohibitively higher than the benefits of disclosing,  $c \geq \mu E[m_k] - E[\tilde{x}|ND]$ .  $\mu E[m_k] - E[\tilde{x}|ND]$  represents the seller's gross benefit of disclosing, before considering cost  $c$ .

Observing non-disclosure, investors will revise their probabilities to:

$$\begin{aligned}
E[\tilde{x}|ND] &= \frac{pE[\tilde{x}]}{p + (1 - p)\Phi(y)} + \frac{(1 - p)\Phi(y)E[\tilde{x}|\tilde{z} < y]}{p + (1 - p)\Phi(y)} \\
&= \frac{px_0}{p + (1 - p)\Phi(y)} + \frac{(1 - p) \int_{\underline{\mu}}^y \mu d\Phi(\mu|.)}{p + (1 - p)\Phi(y)}
\end{aligned} \tag{2}$$

where  $\Phi(\mu|.)$  is the cdf of  $\varphi(\mu|.)$ .  $\Phi(\mu|.) = \int_{\underline{\mu}}^{\mu} \varphi(w|.)dw$

and  $\varphi(\mu|.)$  is the normal density function of  $\tilde{\mu}$ .  $\varphi(\mu|.) = \frac{1}{\sigma_{\mu}\sqrt{2\pi}} \exp[-\frac{(\mu-x_0)^2}{2\sigma_{\mu}^2}]$ .

If  $E[\tilde{x}|ND] < 0$ , the firm will not be sold, so I only focus on the case where  $E[\tilde{x}|ND] > 0$  and the firm is sold given no disclosure. It is clear from (2) that  $E[\tilde{x}] < E[\tilde{x}|ND] < E[\tilde{x}|\mu < y]$ . The selling firm's manager would be indifferent between disclosure and non-disclosure when equality holds between (1) and (2).

$$E[\tilde{x}|D] = E[\tilde{x}|ND]$$

$$\mu \bar{m}_k - c = \frac{px_0}{p + (1-p)\phi(y|\cdot)} + \frac{(1-p) \int_{\underline{\mu}}^y \mu d\phi(\mu|\cdot)}{p + (1-p)\phi(y|\cdot)}$$

An equilibrium solution exists if there is a positive threshold  $y \in [\underline{\mu}, \bar{\mu}]$ , where

$$y \bar{m}_k - c = \frac{px_0}{p + (1-p)\phi(y|\cdot)} + \frac{(1-p) \int_{\underline{\mu}}^y \tilde{\mu} d\phi(\mu|\cdot)}{p + (1-p)\phi(y|\cdot)}$$

The integral above simplifies to, using integration by parts,

$$\begin{aligned} \int_{\underline{\mu}}^y \tilde{\mu} d\phi(\mu|\cdot) &= \mu\phi(\mu)|_{\underline{\mu}}^y - \int_{\underline{\mu}}^y \phi(\mu|\cdot) d\mu \\ &= y\phi(y|\cdot) - \int_{\underline{\mu}}^y \phi(\mu|\cdot) d\mu \end{aligned}$$

Finally, I solve for the disclosure threshold  $y^*$ .

$$y^* = \frac{cp + c(1-p)\phi(y|\cdot) + px_0 - (1-p) \int_{\underline{\mu}}^y \phi(\mu|\cdot) d\mu}{\bar{m}_k(p + (1-p)\phi(y|\cdot)) - (1-p)\phi(y|\cdot)}$$

(3)<sup>11</sup>

The threshold  $y^*$  from equation (3) is consistent with the intuition that if disclosure creates greater value by attracting a better bid, i.e.,  $\bar{m}_k$  is higher, then the threshold of disclosure is lower.

In summary, this model explicitly formulates how real valuation benefits and disclosure costs impact the firm's decision to announce strategic alternatives. *Ceteris paribus*, the disclosure threshold is a function of costs in the numerator and benefits in the denominator. This theoretical model motivates empirically documenting the costs and benefits associated with disclosure, holding all else constant.

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<sup>11</sup> Proof: Equation (3) has a solution if and only if  $h(y) = y - f(y) = 0$  for some  $y^*$ . For  $y = \underline{x}$ ,  $h(\underline{x}) < 0$  because  $f(\underline{x}) > 0$ . And for  $y = \bar{x}$ ,  $h(\bar{x}) < 0$  because  $f(\bar{x}) > 0$ . Since  $h(\underline{x}) < 0$ ,  $h(\bar{x}) < 0$ , and  $h(y)$  is a continuous function of  $y$ ,  $h(y)$  must equal zero for some  $y^*$  in the interval  $(\underline{x}, \bar{x})$ . The solution is unique if the function  $h(y)$  is monotonically increasing.

### 3.2 Hypotheses development

Finding a positive announcement return would be consistent with investors knowing that managers disclose only if they have relatively good news above some threshold (Jung and Kwon, 1988; Shavell, 1994). However, it is unclear whether the market correctly impounds the seemingly-positive news, because strategic alternatives announcements may not be as highly predictive of future acquisitions as investors and the announcing managers initially expect. Therefore, it is interesting to examine the long-run returns to the announcement. Furthermore, the theoretical model in the previous subsection assumes that  $E[m_k] = \bar{m}_k$  is a rational expectation of  $m_k$ . If this were true, then the announcement would unambiguously be positively associated with future returns, which reflect the realization of  $\tilde{x}$ . In reality, however, there is uncertainty in the future transactional outcome. For example, a disclosing manager may rationally expect to receive a valuation premium but then M&A negotiations fail unexpectedly, or a disclosing manager may irrationally have upwardly-biased expectations of a realistic takeover premium or the probability of a takeover. In these cases, the announcing firms that are not acquired and do not receive the M&A-related valuation premium are predicted to exhibit negative returns in the long run. These firms announced strategic alternatives because their managers expected the benefits to outweigh the costs, but when the valuation benefit fails to materialize because the firm is not sold, the cost to firm value is observed.

In my first hypothesis, I make predictions concerning the long-run stock returns associated with announcing strategic alternatives. On one hand, I predict a valuation benefit for the announcing firms that are subsequently acquired and thus able to capture any M&A benefit from casting a wider net. In the long run, if the market impounds the news correctly at the announcement, the positive announcement return should not reverse and the long-run returns would be positive. On the other hand, for the firms that are not acquired (including those that are bankrupted or liquidated), the announcement would be costly. In those cases, I predict that the announcement is associated with abnormal negative long-run returns, reflecting costs to publicly disclosing strategic alternatives.

***H1:*** *Announcing firm that are subsequently acquired experience excess long-run returns (reflecting net valuation benefits) compared to control firms that are also acquired, while announcing firms that are not*

*subsequently acquired experience abnormal negative long-run returns (reflecting net costs) compared to entropy-balanced firms that are not acquired.*

The first hypothesis operationalizes the theoretical prediction that significant net valuation benefits incentivize some firms to disclose while significant net valuation costs dissuade other firms from disclosing. Exploiting the inherent uncertainty and resolution of *ex-post* outcomes, I can observe valuation benefits (i.e., an excess acquisition price) accruing only to firms that are subsequently acquired, and I can also observe valuation costs when announcing firms' managers think expected benefits outweigh expected costs, but get it wrong (i.e., are not acquired). For the unacquired firms, the positive announcement reaction will gradually dissipate and price will reverse if the announcing firm is not acquired after a sustained period of time. Investors gradually realize that the firm is unsaleable and unsalvageable at its current price, the public admission of business problems wears on operations, and thus, shares slide.

Of all possible outcomes to analyze, I devote the most attention to returns because price is the most important metric in M&A deals, and future stock prices reflect the aggregate net benefits or costs from the announcement. Furthermore, any initial uncertainty about the transactional outcome and shareholder value resolves itself in long run stock prices. Specifically, for firms that are subsequently acquired, or bankrupted or liquidated, the terminal shareholder value becomes clear.

Next, I make predictions about potential mechanisms that could lead to the valuation benefits and costs reflected in long-run returns.

**H2:** *Firms that announce strategic alternatives experience abnormally higher rates of information acquisition and, for those that do receive bids, have an abnormally higher number of interested bidders in the M&A sale process.*

**H3:** *Firms that announce strategic alternatives experience abnormally lower future changes in revenues, future changes in operating income, and future employee growth.*

A potential benefit of publicly announcing strategic alternatives comes from not only the news content but also the wider dissemination of news, compared to private communication channels through bankers and interpersonal relationships. While bankers use their networks to privately identify and contact



potential suitors, a public announcement can effectively disseminate information to a wider set of potential suitors that had previously eluded private solicitation.<sup>12</sup> Publicly disclosing strategic alternatives can also cast a wider net to more potential buyers and investors and, by generating greater investor attention and interest, can lead to a higher takeover premium.<sup>13</sup> Finally, public disclosure of information reduces acquisition costs for private information about a firm's availability and amenability to a sale.<sup>14</sup> Therefore, I predict that announcements of strategic alternatives incite real action by market participants, namely, more information acquisition about the potential target and a greater number of interested bidders in the M&A sale process. These potential mechanisms could reasonably enhance shareholder value through M&A if the firm is successfully sold.

In light of the benefits associated with announcing, the costs must be significant enough to deter some firms from announcing. Public knowledge that a company is trying to sell itself may lead to dysfunctional behavior of the firm's current and potential stakeholders. For example, with knowledge that their employer is trying to sell itself, employees may be less productive, may be interviewing at competitors, and may leave the company. Current and potential suppliers and distributors may be less likely to renew or initiate business with a firm that might cease to be a going concern. Customers may not purchase the firm's products due to concerns about deteriorating quality and customer support.<sup>15</sup> The announcement serves as a public admission that the current stand-alone firm strategy is not expected to be viable. It makes the firm appear desperate to the public, employees, customers, and other business stakeholders, which could

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<sup>12</sup> Casting a wider net leads to a higher takeover return due to the following non-mutually-exclusive reasons. First, wider information dissemination can attract the optimal buyer with the greatest synergistic gains from M&A. Second, the mere threat of more rival bids following a public disclosure creates a contestable market and elicits competitive offers (Aktas et al., 2010). Third, actual competitive bidding with more bidders results in the winner's curse (Boone and Mulherin, 2008).

<sup>13</sup> Eagle Hospitality Properties Trust, Inc. (see Appendix 1A) received measurably more interest with a public announcement than with private solicitation, and the enhanced M&A sale process led to a premium of approximately 42% over the closing stock price from the day before the strategic alternatives announcement.

<sup>14</sup> Potential bidders have to expend considerable resources to evaluate a potential target and get board approval to approach a potential target, so a self-issued declaration by a potential target makes it easy for potential suitors to identify a potential target.

<sup>15</sup> For example, BlackBerry's stock gained +10.4% on August 12, the first trading day after its strategic alternatives weekend announcement. However, its announcement (see Appendix 1B) caused dysfunctional consequences on its customer base, which then negatively impacted sales revenue.

negatively affect measurable outcomes like sales revenue, operating income, and employee attrition, which then lead to lower stock prices. From casting a wider net, managers and directors are also likely to spend more time in meetings with more potential buyers, detracting from operational oversight, moreso than with a private pursuit of strategic alternatives with fewer potential buyers. The announcement's negative impact on future operations and future growth is consistent with the long-run valuation cost.

#### **4. Data**

I construct my sample of strategic alternatives announcements by searching on DirectEdge for 8-K Filings and on Factiva for press releases. Factiva's news sources include The Financial Times, The New York Times, Dow Jones Institutional News, Business Wire, PR Newswire, The New York Post, The Wall Street Journal, The American Banker, The Fly on the Wall, Bloomberg, The Boston Globe, Market Watch and Reuters News. I search for various combinations of the following key words and phrases, where \* represents a wildcard: review\*, assess\*, evaluat\*, consider\*, strategic, alternatives, options, sale of the company, merger of the company, retained, engaged, advisor, special committee, board, maximize, enhance, shareholder, stockholder, value. I also include observations from SDC of target firms that are "seeking a buyer" after manually verifying the related 8-K Filing or press release. I review each announcement to exclude search results that are false positives: announcements of a bid, announcements of a definitive agreement, announcements where only a division or limited assets are up for sale, and announcements of fire sales during bankruptcy proceedings. See Appendix 1 for two examples of strategic alternatives announcements in my sample. My sample consists of 1,006 disclosures from 1990 to 2014, where the required Compustat and CRSP variables are non-missing. To the extent that my manual collection missed some strategic alternatives observations and misplaced them in the control group, my results are likely to be understated.

Quarterly financial data are from Compustat, price and returns data are from CRSP, ownership data are from Thomson Reuters, M&A offer data are from SDC, activism data are from Audit Analytics, analyst and management forecasts are from I/B/E/S, and risk-free rates and asset pricing factors are from Kenneth French's website. I require non-missing total assets ( $ASSETS_{i,q}$ ), market value of equity ( $MKVAL_{i,q}$ ), book-

to-market ratio ( $BTM_{i,q}$ ), leverage ( $LEV_{i,q}$ ), cash and equivalents ( $CASH_{i,q}$ ), change in return-on-assets ( $\Delta ROA_{i,q}$ ) from the corresponding prior-year's quarter, cash flows from operations ( $CFO_{i,q}$ ), cash flows from investing activities ( $CFI_{i,q}$ ), operating accruals ( $ACC_{i,q}$ ), prior 12-month market-adjusted returns ( $MARET_{i,y}$ ), CAPM beta ( $BETA_{i,y}$ ), and future returns ( $MARET_{i,y+1}$  and  $ARET12MO_{i,y+1}$ ). See Appendix 2 for variable definitions. All variables except returns are winsorized at the 1 and 99 percent tails.

To construct the control group, I start with the non-announcing observations from the same Fama-French 48 industry-years as the announcing firms. I only use the non-announcing firms that have common support of firm characteristics as the announcing firms, i.e., each control observation must fall within the announcement group's range of each firm characteristic.<sup>16</sup> The control group is comprised of 63,454 observations. Observations in the control group are then weighted, as discussed in the next section. No firm appears in the sample more than once every four quarters, to avoid the possibility that a firm is categorized as an announcing firm in one quarter and as a control firm in an adjacent quarter. Each control observation is randomly assigned a pseudo-announcement date, consistent with the month and year distributions of actual announcement dates.

Figure 1 shows the distributions of industries and years. Panel A shows the distribution of the Fama-French 12 industries of the announcement group and control group.<sup>17</sup> The control group has the same FF 12 industry distribution as the announcement group. Panel B shows the distribution of calendar years of the announcement group and control group. The control group has the same year distribution as the announcement group. The similar industry and year distributions should mitigate confounding effects due to M&A merger waves and other industry- and time-varying market conditions (Andrade, Mitchell, and Stafford, 2001).

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<sup>16</sup> "This search for balance will reveal that there are members of [the control group] who are so unlike any member of the [treatment group] that they cannot serve as points of comparison [...] and then such units must be discarded" (Rubin, 2010, p. 1993). Control observations are dropped if any of their firm characteristics are outside of the announcement group's range.

<sup>17</sup> I use the Fama-French 48 industry classification and years to select the control firms, but, due to limited degrees of freedom with my announcing group (1,006 observations), I use the 12 industry classification for entropy-balancing (along with years and firm covariates) and fixed effects (along with years). Overfitting with additional FF 48 industry dummy variables is a real concern in finite samples.

#### 4.1 Data about future outcomes

Each announcing or control firm is either acquired, liquidated or bankrupted, or remains independent after one year. A firm may also receive bid(s) within one year. A one year window should be sufficient, since Barraclough et al. (2013) found the mean time interval between the M&A announcement date and completion or withdrawal to be 87.4 days. I identify completed acquisitions and the completion dates using three sources: Compustat’s deletion codes for an acquisition or merger (code 01), reverse acquisition (code 04), leveraged buyout (code 06), and take-private (code 09); CRSP’s delisting code for mergers (first digit 2); and SDC Platinum’s effective date.<sup>18</sup> I use all three sources because some target firms that CRSP or Compustat record as acquired are not covered or are not ‘completed’ per SDC. I also use SDC Platinum to obtain the number of bidders in the final public round of M&A, when applicable ( $NUMBIDDERS_{i,t}$ ), although SDC understates the total number of bidders (Barnes, Harp, and Oler, 2014). I identify completed liquidations and bankruptcies and their dates using two sources: Compustat’s deletion codes for bankruptcy (code 02), liquidation (code 03); and CRSP’s delisting code for Liquidation (first digit 4). CRSP’s Delisting Codes for Dropped (first digit 5) and Expiration (first digit 6) are only used if the observation is not already identified as acquired. Other future consequences I examine include: future abnormal EDGAR downloads ( $ABDOWNLOAD_{i,t+10}$ ) to measure investor attention and information acquisition; future changes in revenues ( $REV_{i,q+2}-REV_{i,q-2}$ ); future changes in operating income ( $OI_{i,q+2}-OI_{i,q-2}$ ); and future annual employee growth ( $EMP_{i,y+1}-EMP_{i,y}$ ).

### 5. Research Design and Results

#### 5.1 Controlling for selection using the appropriate control group

The announcement of strategic alternatives—both its public dissemination and the content that is conveyed and inferred—is the partitioning variable of interest ( $ANNOUNCE_{i,t}$ ). Since strategic alternatives

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<sup>18</sup> The SDC screens I apply are: 1. Target is a public U.S. company. 2. “Deal type” is a Disclosed value M&A, Undisclosed value M&A, LBO, Tender offer, Acquisition of remaining interest or Privatization. 3. “Deal form” is a Merger, Acquisition, Acquisition of assets, Acquisition of majority interest or Acquisition of remaining interest. 4. The Percent of Shares Acquirer is Seeking to Own after Transaction is 99-100. 5. The percent of Shares Acquirer is Seeking to Purchase in Transaction is 50-100. 6. The deal is announced between 1/1/1990 – 12/31/2015.

announcements are voluntary, an exogenous shock to mandate voluntary disclosure is not conceivable, by no longer being voluntary. The starting point to analyzing observational data is to make the choice between the two treatment options—“announce” or “not announce”—as good as randomly assigned, conditional on a variety of *ex-ante* firm characteristics (Rubin, 2008). The assumption of ignorable treatment assignment that underlies estimating differences in future outcomes states that, conditional on the *ex-ante* covariates, the distribution of units across treatment conditions is “random” with respect to the future potential outcomes. The ignorable treatment assignment (also called selection on observables) assumption is formalized by the conditional independence statement,  $y_0, y_1 \perp D \mid X$ . In words, the distribution of the potential outcomes,  $(y_0, y_1)$ , is the same across treatments,  $D=1$  or  $D=0$ , once I condition on covariates  $X$ . Then causal inferences can be made without modeling the treatment assignment process. According to Leuz and Wysocki (2016), observational voluntary disclosure studies “provide, at best, estimates for the treatment effect on the treated. [...] The primary role of studies using variation from firms’ choices is therefore to illustrate potential costs and benefits from corporate disclosure and reporting activities.” If ignorability and the stable unit treatment value assumption (SUTVA) hold, then the average treatment effect on the treated (ATET) is:  $E[Y_1 - Y_0 \mid D=1] = E[Y_1 \mid D=1] - E[Y_0 \mid D=1] = E[Y_1 \mid D=1] - E[Y_0 \mid D=0]$ .

It is important to note that future variables should not be used in designing the control group; selected covariates should be pre-treatment variables. My research design holds constant, in expectation, the following *ex-ante* firm variables and proxies.

*Firm size.* A firm with small market capitalization may desire the public advertisement of its for-sale status from a strategic alternatives announcement, yet it is also cheaper and more likely to become acquired in the future than a large firm. Small firms also experience abnormal future stock returns. Measures: market value of equity ( $MKVAL_{i,q}$ ) and total assets ( $ASSETS_{i,q}$ ).

*Growth prospects and forecasts.* The growth expectations embedded in investors’ and analysts’ expectations could lead a firm to seek alternatives while also affecting future returns, M&A outcomes, and future operations. Firms’ bleak outlooks are constructed to be the same in the announcing and entropy-balanced groups. Walking and Edmister (1985) and Lang, Stulz and Walking (1989) find a negative

association between the market-to-book-ratio or Tobin's Q and higher takeover premiums. Measures: book-to-market ratio ( $BTM_{i,q}$ ) and analysts' EPS growth forecasts ( $EPSFORECAST_{i,m}$ ).

*Liquidity and debt burden.* Shareholders of firms threatened by low liquidity, debt burdens, or substantial firm value tied up in intangible assets may be more likely to seek a strategic out and monetize their shareholder value by getting acquired. Or, leverage increases may reduce the probability of a takeover (Safieddine and Titman, 1999). Walking and Edmister (1985) and Aktas et al. (2010) show a positive association between the targets' debt level or change and the takeover premia. Measures: Cash-to-assets ( $CASH_{i,q}$ ), intangibles-to-assets ( $INTAN_{i,q}$ ), and leverage ( $LEV_{i,q}$ ).

*Operating performance and stock performance.* Firms that are poorly performing may be more likely to pursue strategic alternatives; firms that are even more poorly performance may be likely to announce strategic alternatives because they are especially desperate. These firms may not be investing as much in long-term operating accruals and employees given their dire situation. Measures: Change in return-on-assets ( $\Delta ROA_{i,q}$ ), revenues ( $REV_{i,q}$ ), cash flows from operations ( $CFO_{i,q}$ ), cash flows from investing ( $CFI_{i,q}$ ), operating accruals ( $ACC_{i,q}$ ), annual employee growth ( $EMPGR_{i,y}$ ), and prior market-adjusted 12-month returns ( $MARET_{i,y}$ ).

*Risk.* Firms that are seeking and announcing strategic alternatives may have too little or too much risk. Further, levered firms with higher betas are likely to experience higher long-run returns. Measures: leverage ( $LEV_{i,q}$ ) and CAPM beta ( $BETA_{i,y}$ ).

*Information environment.* Capital-market intermediaries like analysts and institutional investors are known to be positively associated with disclosure. Institutional ownership from expanded disclosure is likely to create increased demand for analyst coverage, and lead to additional increases in institutional ownership. Measures: analyst following ( $NUMANALYSTS_{i,m}$ ) and institutional blockholder ownership ( $BLOCKHOLDER_{i,m}$ ).

*Managerial ability and bias.* Managers that announce strategic alternatives may be making an optimal decision to increase expected value for shareholders using unbiased estimates about potential future outcomes, or they may be overoptimistic that an announcement would improve the chance of a successful

takeover. Measure: managers' earnings forecast error ( $MANAGERFE_{i,m}$ ) and absolute forecast error ( $|MANAGERFE_{i,m}|$ ).

*Agency problems.* An important assumption when managers choose to voluntarily disclose is that there is no agency conflict between managers and shareholders. Managers of firms that have limited governance mechanisms may be entrenched and not serving as an agent to shareholders. Measures: institutional blockholder ownership ( $BLOCKHOLDER_{i,m}$ ) and insider ownership ( $INSIDER_{i,m}$ ).

*Propensity score.* I estimate the propensity to seek and announce strategic alternatives as the fitted value from a linear probit model of  $ANNOUNCE_{i,t}$  on  $\ln(MKVAL_{i,q})$ ,  $BTM_{i,q}$ ,  $LEV_{i,q}$ ,  $CASH_{i,q}$ ,  $INTAN_{i,q}$ ,  $\Delta ROA_{i,q}$ ,  $REV_{i,q}$ ,  $CFO_{i,q}$ ,  $CFI_{i,q}$ ,  $ACC_{i,q}$ ,  $EMPGR_{i,y}$ ,  $BETA_{i,y}$ ,  $MARET_{i,y}$ ,  $NUMANALYSTS_{i,m}$ ,  $MANAGERFE_{i,m}$ ,  $BLOCKHOLDER_{i,m}$ ,  $INSIDER_{i,m}$ , FF 12 industry dummies, and year dummies. Measure:  $P-SCORE_{i,t}$ .

Following Diamond and Sekhon (2012), Hainmueller (2012), and Hainmueller and Xu (2013), I weight the control observations so that all aforementioned covariates are balanced between the treatment group and control group, leaving no statistically significant differences in the minimum values, means, standard deviations, and maximum values of all covariates between the announcement group and control group.<sup>19</sup> This method assigns a weight to each control observation of  $0 < w_i < 1$  that minimizes the differences between the treatment group's and control group's means and standard deviations, in expectation, along specified firm covariates. The sum of weights on the control observations are  $\sum_{i=1}^{63,454} w_i = 1,006$ . Essentially, both treatment and control groups are weighted to represent the treatment group. The distribution of FF 12 industries and years are also balanced between the announcement group and control group, as seen in Figure 1, to control for industry- and time-varying effects and M&A consolidation waves (Andrade, Mitchell, and Stafford, 2001).

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<sup>19</sup> Other methods to create a control group were considered but raised the following criticisms (Diamond and Sekhon, 2012). First, other methods cannot match on multiple covariates; even coarsened exact matching involves a tradeoff between coarsening data into broad portfolios, the number of covariates, and losing observations without a match. Second, one-to-one matching methods induce measurement error and volatility from using a single control observation matched with each treatment observation. This is especially important when looking at future returns, because using a single control firm is a noisier way to control for expected returns than is using multiple control firms. Third, matching or weighting based on a single propensity score variable requires a correctly specified linear model, but specification and linearity are unlikely to be correct and often, an imperfectly-balanced control group emerges.

Table 1 Panel A presents the empirical distributions of key characteristics between the treatment group and control group, and Panel B presents the  $t$ -tests of differences in their means. This table ensures that covariates are balanced across treatment and control groups. There are no statistical differences, with the majority of  $p$ -values between 0.90 and 1 in Panel B. Figure 2 graphs the time series of select firm characteristics to show how the mean and median attributes of the control group closely match those of the announcement group. Firms that seek and announce strategic alternatives exhibit increasing book-to-market, declining analysts' EPS forecasts, and constant high levels of institutional ownership; by construction, the control group also exhibits the same levels and changes/trends at the mean and median.

Creating a control group that is statistically indistinguishable along the aforementioned variables and proxies also mitigates differences in unobservable traits; Altonji, Elder, and Taber (2005) formalize that the effect of 'selection on observables' on outcomes can be assumed to be the same as the effect of 'selection on unobservables' on outcomes. I show this to be plausible in Table 1. As shown in Panel B, I intentionally omit some variables— $ACTIVIST_{i,m}$ ,  $|MANGERFE_{i,m}|$ , and  $P-SCORE_{i,t}$ —when weighting the control observations, as if those variables were unobservable. Yet, the  $t$ -tests of those three variables show that the control group is statistically indistinguishable from the treatment group based on the three as-if-unobservable variables. In addition, the subsamples of the control group that subsequently are acquired, liquidated, or bankrupted, or received bids have likely sought strategic alternatives but did not announce. So my results from comparing these *ex-post* subsamples of the announcement group and the control group can be made with increased confidence. I also include fixed effects (industry and year), which control for correlated omitted variables that do not vary within the level of the fixed effect.

Since the control group was formed based on *ex-ante* variables only (Rubin, 2008), observed potential outcomes between the groups are expected to and do diverge, and these differences are interpreted as the consequences to announcing strategic alternatives.

## 5.2 Future return results

My primary valuation measure is a firm's buy-and-hold stock return over the future one year. Each control firm is assigned a pseudo-announcement date following the actual date distribution of strategic



alternatives announcements from the announcement group. Relative to the announcement date or pseudo-announcement date, two measures of returns are calculated.<sup>20</sup>

- (i) *Buy-and-hold market-adjusted returns.*  $MARET_{i,y+1}$  is measured from day -10, to capture any pre-announcement leakage, to trading day +252 (equivalent to one year) following the announcement or pseudo-announcement date. The measurement window ends with the delisting return if the firm is acquired or liquidated within the one year. The CRSP value-weighted return over the same window is subtracted (Brown and Warner, 1985).
- (ii) *Buy-and-hold risk-adjusted 12-month returns.*  $ARET12MO_{i,y+1} = \prod_{m=1}^{12} (1 + aret_{i,m}) - 1$ , where  $maret_{i,m}$  is the abnormal monthly return from the CAPM OLS market model (Brown and Warner, 1985).<sup>21</sup> If the stock is delisted within the following 12 months (due to acquisition,  $ACQIYR=1$ , or liquidation or bankruptcy,  $LIQIYR=1$ ), then the terminal 12-month return is used, so that all observations have a 12-month window.

The advantage of using buy-and-hold returns is that they accurately represent investors' experience (Lyon, Barber, and Tsai, 1999). Subtracting out the market return in measure (i) alleviates concerns that the measurement window length varies and is preferable to using raw buy-and-hold returns, since a longer window generally leads to greater raw returns.

Figure 3 Panel A presents the mean returns of announcement group ( $ANNOUNCE=1$ ) versus control group ( $ANNOUNCE=0$ ). The returns to the control group measures normal or expected return. The announcement date is day 0. Returns ( $MARET_{i,y+1}$ ) are measured from day -10 to day +252, or the delisting date, if earlier. Panel B depicts the median market-adjusted returns of the announcement group and control group. In both panels, the mean and median 3-day announcement return is approximately +6 percent. Stock

<sup>20</sup> Although using a long-window for returns introduces noise, a long window that extends through the completion of the acquisition or liquidation transaction can capture the full consequence of disclosure on firm value.

<sup>21</sup>  $aret_{i,m} = ret_{im} - r_m^f - \hat{\beta}_{i,y}(r_m^{mkt} - r_m^f)$ .  $\hat{\beta}_{i,y}$  is the estimated firm-year CAPM beta using monthly observations of firm  $i$  during years  $y-2$ ,  $y-1$ , and  $y$ , where at least 10 observations are required for estimation:  $(ret_{i,m} - r_m^f) = \alpha_{i,m} + \beta_{i,y}(r_m^{mkt} - r_m^f) + \varepsilon_{i,m}$ . Monthly market return  $r_m^{mkt}$  is the CRSP value-weighted monthly return. Any delisting return is included in  $ret_{i,m}$ .

prices subsequently decline and revert to the control group's cumulative return near the middle of the measurement window. Over the one-year horizon, the valuation premium incited by the announcement reverses and the announcement group eventually underperforms the control group in Panel A. However, in Panel B, the median announcement firm outperforms the median control firm. The different results between the mean (Panel A) and median (Panel B) returns are likely due to outliers in stock performance, since I do not winsorize the return variables. In both panels, the post-announcement return predictability of the announcing firms is puzzling in light of the efficient market hypothesis and the market's positive announcement reaction.

Figure 4 separately depicts returns ( $MARET_{i,y+1}$ ) conditional on ex-post transactional outcomes. Within the announcement group and control group, firms are either acquired within one year ( $ACQIYR=1$ ), liquidated within one year ( $LIQIYR=1$ ), or remain independent ( $ACQIYR=0&LIQIYR=0$ ). This results in six subsamples:

- (i) Announcement observations that are acquired within one year, as the green solid line.
- (ii) Control observations that are acquired within one year, as the green dashed line.
- (iii) Announcement observations that are liquidated within one year, as the red solid line.
- (iv) Control observations that are liquidated within one year, as the red dashed line
- (v) Announcement observations that remain independent, as the yellow solid line.
- (vi) Control observations that remain independent, as the yellow dashed line.

Panel A presents the mean returns, and Panel B presents the median returns. Both panels show consistent results. At the end of one year, the mean and median acquired announcing firms overperform the acquired control firms, but the non-acquired announcing firms underperform the non-acquired control firms. The underperformance of the announcing firms that remain stand-alone entities, which comprise the majority of the announcement group, appears to drive the post-announcement stock price decline depicted in Figure 3, Panels A and B. It is also interesting to note that in Figure 4, the announcement returns of the subsequently-independent firms appear smaller than the announcement returns of the subsequently-acquired firms, suggesting that investors can partially predict the announcers' transactional outcomes.

Table 2 presents the mean and median values of  $MARET_{i,y+1}$  of the announcement group and control group, and their subsamples conditional on transactional outcomes. The mean returns of the announcement group is not statistically different from that of the control group (-0.3% vs. +4.0%,  $p=0.147$ ). The mean returns for the announcing firms that are acquired are economically higher than the mean returns of the control firms that are acquired, but are not statistically different (+31.2% vs. +25.6%,  $p=0.156$ ); however, they are statistically different in the following multivariate analyses. The mean returns of independent announcing firms compared to the mean returns of the independent control firms are statistically different (-7.5% vs. +6.4%,  $p=0.000$ ). This suggests that announcing firms that are unable to capture the valuation benefit via a takeover are faced with negative consequences of disclosure on firm value. The statistically lower mean returns of the announcers that are liquidated and bankrupted are consistent with the negative valuation consequences of announcing on firm value, although this difference is not statistically different (-60.1% vs. -54.5%,  $p=0.192$ ). This suggests that even though liquidated control firms may have privately explored strategic alternatives before going bankrupt or liquidating, the cost of publicly announcing strategic alternatives destroyed shareholder value. Overall, the univariate tests provide preliminary evidence consistent with the first hypothesis.

To control for variables that differ across firms, industries, and years and that may affect stock returns, I use a regression framework for multivariate analysis. The dependent variable for the regressions in Table 3 is the buy-and-hold stock return,  $MARET_{i,y+1}$  or  $ARET12MO_{i,y+1}$ .

$MDRET_{i,y+1}$  or  $ARET12MO_{i,y+1}$

$$= \beta_0 + \beta_1 ANNOUNCE_{i,t} + \beta_2 ACQ1YR_{i,t} + \beta_3 ACQ1YR_{i,t} * ANNOUNCE_{i,t} + \beta_4 LIQ1YR_{i,t} + \beta_6 LIQ1YR_{i,t} * ANNOUNCE_{i,t} + \sum_{k=6}^K \beta_k controls_k + \varepsilon_{i,t}$$

Returns are regressed on the announcement indicator variable ( $ANNOUNCE$ ), *ex-post* outcome indicator variables ( $ACQ1YR$  and  $LIQ1YR$ ), and their interactions. The interaction terms between the announcement and outcome indicator variables are essentially difference-in-difference estimators that parse out the differential returns associated with each announcement-outcome combination. The ‘difference-in-

difference' estimator measures the changes in firm value of announcing firms compared to the changes in firm value of the control firms.

Table 3 Panel A, Column (1) presents the differential returns for each of six announcement-outcome combinations, and the results are consistent with the returns presented in Figure 4 and Table 2. The independent control firms' average  $MARET_{i,y+1}$  is +6.4 percent (intercept  $\beta_0$ ,  $t=1.56$ ). The announcing firms have  $MARET_{i,y+1}$  that is -14.0 percent lower than control firms ( $\beta_1$ ,  $t=-2.66$ ) representing the disclosure cost on firm value. In total, announcing firms' net estimated  $MARET_{i,y+1}$  is -7.6 percent (+6.4 – 14.0). The acquired control firms have (market-adjusted) takeover-related premia averaging +25.6 percent, from +6.4 and +19.2 percent ( $\beta_2$ ,  $t=5.97$ ). The announcing, acquired firms an *additional* valuation benefit from disclosing of +5.6 percent, from -14.0 and +19.6 ( $\beta_3$ ,  $t=3.71$ ). In total, acquired, announcing firms' net estimated  $MARET_{i,y+1}$  is +31.2 percent (+6.4 – 14.0 + 19.2 + 19.6).

Control variables are included in the specification in Column (2) because even though firm characteristics are balanced across the treatment and control groups, there is still variation within groups than can explain returns. Column (2) controls for risk factors, firm fundamentals, other characteristics, and industry and year fixed effects, and results are consistent. When testing long-window returns, it is important to control for certain firm characteristics that have been shown by prior literature to be associated with return predictability:

- (i) Size, measured as  $\ln(MKVAL)$ . Small firms earn abnormally high returns (Barber and Lyon, 1997).
- (ii) Book-to-market, measured as  $BTM$ . Stocks with high book-to-market are considered value stocks and earn abnormal returns (Barber and Lyon, 1997).
- (iii) Systematic risk, measured as  $BETA_{i,y}$ . The CAPM beta represents the degree that a security's price variability cannot be diversified away. This systematic risk is related to expected returns and is priced in equilibrium.
- (iv) Prior 12-month market-adjusted stock returns, measured as  $MARET_{i,y}$ . De Bondt and Thaler (1985) show mean reversion in cross-sectional stock prices. Losers show significant price reversals while winners' reversals are smaller or nonexistent.

(v) Other control variables are *LEV*, *CASH*, *INTAN*,  $\Delta ROA$ , and *CFO*, *CFI*, *ACC*, and industry and year fixed effects.

Panel B uses risk-adjusted returns,  $ARETI2MO_{i,y+1}$ , as the dependent variable, and results are consistent with those in Panel A. Taken together, the results from Figure 4, Table 2, and Table 3 provide consistent evidence that the announcement of strategic alternatives creates real value for the announcing firms that are subsequently acquired. However, if the announcing firm is not subsequently acquired, then the announcement appears to lead to a discount in the firm's value.

### 5.3 Mechanisms of disclosure benefits

Several testable mechanisms could potentially explain why firms that are subsequently acquired benefit from preemptively announcing strategic alternatives. Announcing firms could benefit from increased interest, which can be observed as a higher rate of daily downloads off EDGAR from potential interested bidders and investors (*ABDOWNLOAD*) and a higher number of interested bidders in the M&A sale process (*NUMBIDDERS*). The observations in these tests are restricted to those with available EDGAR download data from the SEC for the years 2003-2014 and to those with details about the number of bidders from SDC, respectively.

$$ABDOWNLOAD_{i,d+10} \text{ or } NUMBIDDERS_{i,t} = \beta_0 + \beta_1 ANNOUNCE_{i,t} + \sum_{k=2}^K \beta_k controls_k + \varepsilon_{i,t}$$

Results in Table 4 Panel A shows that the abnormal daily EDGAR downloads is significantly higher for firms that announced strategic alternatives compared to that of the entropy-balanced non-announcing firms. Abnormal downloads are measured 10 trading days after the announcement to reflect sustained attention and potential interest by market participants, and results are robust to instead using 5 days after the announcement. A GLM model with a log link is used, due to the skewness of the dependent variable. The marginal effects of 0.684 in Column (2) and 0.672 in Column (4) are interpreted as the difference in incidence rate of abnormal downloads.<sup>22</sup> In the first specification presented in Columns (1) and (2), at the

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<sup>22</sup> To interpret the coefficient in Column (1),  $e^{0.480} = 0.684$  = the difference between the predicted incidence rates.

margin, not announcing is associated with abnormal downloads of 1.088, while announcing is associated with abnormal downloads of 1.760. Since  $ABDOWNLOAD_{i,d+10}$  is the daily downloads on the  $d+10$  day divided by the average daily downloads of the previous 365 days, the value of  $ABDOWNLOAD$  should tend towards 1. Therefore, the control group's  $ADBOWNLOAD$  incidence rate of 1.088 being close to 1 is expected, since the control firms do not experience abnormal downloads due to not having an announcement. Results in Columns (3) and (4) are robust to additional controls.

Results in Table 4 Panel B show that the announcement ( $ANNOUNCE_{i,t}$ ) is positively associated with the number of bidders in the final round of the M&A sale process ( $NUMBIDDERS_{i,t}$ ). This test uses a poisson regression for count data due to the dependent variable.<sup>23</sup> In Column (1), the coefficient on  $ANNOUNCE$  is +0.066 ( $z=2.91$ ), which corresponds to a marginal effect of 0.080 shown in Column (2). This means that at the margin, control firms are expected to receive 1.171 bids, while announcing firms are expected to receive 1.251 bids, which is higher, and the difference is statistically significant. The results are robust to additional control variables in Columns (3) and (4). This benefit is consistent with the public advertisement of a firm reaching more potential buyers, which could plausible result in excess takeover-related returns to shareholders, as found in the previous subsection.

#### *5.4 Mechanisms of disclosure costs*

Testable mechanisms for negative consequences on shareholder value are related to the public information reaching key stakeholders and causing operational dysfunction. When news that a firm is attempting to sell itself becomes public, employees' and executives' efforts are distracted and consumed by the public sale process, some employees may leave the company for competitors, and other stakeholders like customers, suppliers, and distributors may exit current business relationships and may forgo future business relationships. As a result, the announcing firm would suffer from lower future changes in revenues, future changes in operating income, and future employee growth compared to control firms.

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<sup>23</sup> Since the dependent variable is count data following a poisson distribution, I use a poisson regression with cluster robust standard errors to account for within-industry time-series correlation. Although a negative binomial model may also be used for count data, my data does not exhibit overdispersion, which would call for the negative binomial model.

$$\Delta REV_{i,q+2} \text{ or } \Delta OI_{i,q+2} \text{ or } \Delta EMP_{i,y+1} = \beta_0 + \beta_1 ANNOUNCE_{i,t} + \sum_{k=2}^K \beta_k controls_k + \varepsilon_{i,t}$$

The dependent variable is one of the future operating or growth measures. Changes in revenues and operating income are quarterly numbers scaled by average total assets, and I measure the seasonal change from quarter  $q-2$  to  $q+2$ . *EMPGR* is the annual percentage employee growth, as this number is available annually. I control for the *ex-ante* revenues, operating income, or employee growth, respectively, in these OLS regressions.

Results in Table 5 Panel A estimate that publicly announcing strategic alternatives leads to a lower change in future revenues of -0.7% of average total assets in Column (1), and the estimated effect is robust when controlling for additional variables in Column (2). Results in Panel B estimate that announcing strategic alternatives leads to a lower change in future operating income of -1.2% of average total assets in Column (1), and the estimated effect is robust when controlling for other firm characteristics in Column (2). Results in Panel C estimate that announcing strategic alternatives leads to future employee growth that is lower by -3.8 percent in Column (1) or -3.6 percent in Column (2). All of these specific consequences of announcing strategic alternatives are economically and statistically significant, and are consistent with the costs of announcing that is ultimately reflected in stock prices, as found in subsection 5.2.

### 5.5 Falsification tests using sample of media leaks

In Tables 6 and 7, I conduct falsification tests of the future return results presented in Tables 2 and 3, respectively, using an alternative control group of involuntary announcements of strategic alternatives. I use an alternate control group of 151 media leaks of firms seeking strategic alternatives. Media leaks are plausibly involuntary disclosures containing the same news content about strategic alternatives. The distinguishing factor between the announcement group and this alternate control group is self-selection, and so, results disappear as expected. Media-leaked firms do not self-select to have their strategic alternatives processes leaked by the media. These analyses provide orthogonal evidence to support the claim that selection is not driving the finding of the announcement's benefits and costs on firm value. Any effects of the public announcement on stock prices would be expected to be true of both the voluntary disclosers and

the involuntary disclosers. Thus, I expect to not find and do not find any statistically significant results using this alternate control group.

The univariate tests are presented in Table 6 and the multivariate regressions are presented in Table 7. The results show that firms that experience media leaks of their strategic reviews experience similar valuation costs and benefits. This means that the plausibly-exogenous leaked announcement, like the voluntary disclosure, is similarly associated with benefits if the firm is subsequently acquired, and is similarly associated with costs if the firm fails to subsequently sell itself.

Table 6 shows that the difference in long-run returns is similarly positive for firms that are subsequently acquired, whether the disclosure was voluntary or leaked, and the difference is not statistically significant (32.0% vs. 30.8%,  $p=0.888$ ). The long run returns are similarly negative for firms that subsequently remain independent, whether the disclosure was voluntary or leaked, and the difference is not statistically significant (-7.5% vs. -1.0%,  $p=0.415$ ).

Table 7 replicates the returns tests of Table 3 using this alternate control group of 151 media leaks to be the  $ANNOUNCE=0$  observations. In Column (1), as expected, the coefficient estimates on  $ANNOUNCE$  and  $ACQIYR*ANNOUNCE$  are not statistically different from zero. When the specification additionally includes controls in Column (2), results are robust. These non-results in the falsification tests provide comfort that the valuation cost and benefit results associated with voluntary disclosure are also experienced by the firms with involuntary media leaks.

## 6. Conclusion

This paper examines the consequences of firms' public announcements of strategic alternatives on shareholder value. The precursory M&A sale process provides a unique setting in which to examine the economic consequences of a pivotal announcement that is directly related to firm value and M&A outcomes. This paper investigates *whether* and *how* this public announcement decision impacts the eventual value realized by shareholders, and the documented relation to future value is not trivial. Due to the high stakes and disruptive content of strategic alternatives announcements, the positive and negative consequences are economically meaningful.



First, I examine *whether* the announcement is associated with long-run returns. I construct a control group using select industry-year peer observations that results in the same distribution of *ex-ante* fundamental, market, risk, analyst, managerial, and ownership, and governance characteristics as the treatment group. By design, there is evidence of close substitutability of the treatment and control groups (i.e., ignorability of treatment assignment). Exploiting the inherent uncertainty of future transactional outcomes in this setting (firms are either subsequently acquired, liquidated or bankrupted, or remain independent), I document the valuation costs and benefits of announcing strategic alternatives differentially affecting each subsample.

In the short-run, the stock price reacts positively to the announcement. The results for long-run returns are more nuanced. In the long run, *if* managers correctly determined the disclosure threshold in a rational expectations framework, then only those firms with benefits exceeding costs would voluntarily announce strategic alternatives, and I would observe an unambiguous positive association between announcement and firm value. However, due to the uncertainty in this setting, managers could overestimate either their expected valuation premium or their probability of a takeover. Thus, when a deal fails to materialize, those failed target firms experience disclosure costs to shareholder value in the absence of takeover-related gains that could only have been captured by a successful sale. This results in nuanced predictions and findings.

I find that enhanced shareholder value—the benefit—is only captured by firms that are successfully acquired *ex-post*. In contrast, for firms that are not subsequently acquired, the positive announcement returns reverse and become a valuation discount. The economic story is that there are tangible benefits from public dissemination of news on the information environment and M&A sale process, and these benefits are only captured through takeover-related premia. On the other hand, if no buyer emerges over time, the probability of a takeover dissipates and the long-term costs of public disclosure become manifested in firm value. These *ex-post* unacquired firms would have been better off had they not publicly announced, had they known that they were not going to get acquired. The market appears surprised as well in the long-run, because investors

gradually realize that this subsample of firms that announced strategic alternatives will not get acquired, sending their shares sliding.

Second, I examine *how* a public announcement could benefit or damage shareholder value by investigating some potential mechanisms. On the benefits side, the announcement appears to incite real action from market participants that could improve the prospects of an M&A sale process. The announcement leads to greater investor attention and information acquisition, proxied by abnormal EDGAR downloads, and also leads to a greater number of bidders in the M&A sale process. These benefits could plausibly lead to excess takeover-related gains, conditional on a subsequent acquisition. As for negative consequences, I find evidence that the announcement of strategic alternatives induces dysfunction in the firm's operations, consistent with the public knowledge that a firm is selling itself alienating its employees, customers, suppliers, and distributors. These current and potential stakeholders become unvested and forgo business relationships with a firm that is publicly known to be seeking strategic alternatives. I find results consistent with this: the announcement leads to abnormally lower changes in future revenues, changes in future operating income, and future employee growth. Taken together, the existence of significant costs and benefits of disclosure corroborates a theoretical model of the voluntary disclosure decision, where a threshold equilibrium of disclosure results.

Academics and practitioners interested in the consequences of this market-moving corporate disclosures can gain a better understanding about what is likely to happen after observing companies' announcements of strategic alternatives. The consequences of announcing strategic alternatives affect (1) stock prices and investors, (2) the market for corporate control and potential M&A players, and (3) future firm operations. The findings have direct implications for managers, directors, and advisors in firms that are evaluating strategic alternatives and are deciding whether to publicly announce their strategic review. This paper provides overwhelming evidence that future consequences announcing strategic alternatives are varied and economically significant. Therefore, the cost-benefit tradeoff from this disruptive announcement during the preliminary M&A sale process merits careful consideration from managers, directors, and other market participants.

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## Appendix 1 (continued on the following page)

### Panel A: Eagle Hospitality

#### Eagle Hospitality Announces Formation of Special Committee and Decision to Explore Strategic Alternatives

January 29, 2007 -- COVINGTON, Ky. -- Eagle Hospitality Properties Trust, Inc. (NYSE:EHP) announced today that its Board of Directors has established a Special Committee of independent directors to explore strategic alternatives to enhance shareholder value, including a possible sale of the Company. The Special Committee has retained Morgan Stanley as its financial advisor.

There can be no assurance that the exploration of strategic alternatives will result in any transaction. The Company does not anticipate any further public comment on this issue unless and until the Special Committee deems it necessary and appropriate.

#### Subsequent developments:

As part of the special committee's review of strategic alternatives, Morgan Stanley made initial contact with 17 strategic buyers and 32 financial buyers. Morgan Stanley also had contact with an additional four strategic buyers and 13 financial buyers that made unsolicited inquiries following the public announcement of the Company's review of strategic alternatives. (DEF14)

Eagle Hospitality Properties Trust, Inc. (NYSE:EHP - News), a real estate investment trust (REIT) focused on investment opportunities in the full-service and all-suite hotel industry, today announced that it has entered into a definitive agreement to be acquired by AP AIMCAP, a joint venture of Apollo Real Estate Investment Fund V L.P., Aimbridge Hospitality, L.P., and JF Capital Advisors, LLC for \$13.35 per share and unit in cash. [...] The purchase price represents a premium of approximately 21% over Eagle's three-month average closing share price and a premium of approximately 42% over Eagle's closing stock price on January 29, 2007, the day the company announced that a special committee was formed to explore strategic alternatives.

## Appendix 1 (continued)

### Panel B: BlackBerry

#### BlackBerry Board of Directors Announces Exploration of Strategic Alternatives

August 12, 2013 -- WATERLOO, ONTARIO – BlackBerry Limited (NASDAQ:BBRY) (TSX:BB), a world leader in the mobile communications market, today announced that the Company's Board of Directors has formed a Special Committee to explore strategic alternatives to enhance value and increase scale in order to accelerate BlackBerry 10 deployment. These alternatives could include, among others, possible joint ventures, strategic partnerships or alliances, a sale of the Company or other possible transactions. [...]

“During the past year, management and the Board have been focused on launching the BlackBerry 10 platform and BES 10, establishing a strong financial position, and evaluating the best approach to delivering long-term value for customers and shareholders,” said Timothy Dattels, Chairman of BlackBerry’s Special Committee of the Board. “Given the importance and strength of our technology, and the evolving industry and competitive landscape, we believe that now is the right time to explore strategic alternatives.”

#### Subsequent developments:

The company’s move is a telling one. People who purchase struggling tech businesses usually don’t need a public invitation, and it’s a long-open secret that BlackBerry is game for this kind of deal. Its statement reads as an acknowledgement that so far, its more private efforts to sell have failed. [...] It’s unclear who would take BlackBerry forward from here. There’s little reason to think a public assertion that the company is on the auction block would change its grim situation. BlackBerry says that it can’t guarantee it’ll find an acceptable buyer and that it won’t discuss the matter again until it does so or gives up on selling. So why come out and say anything? “It’s probably another PR mistake.”

"The company has sailed off a cliff," said BGC Partners analyst Colin Gillis. "What do you expect when you announce you're up for sale? Who wants to commit to a platform that could possibly be shut down?"

October 2, 2013: BlackBerry Ltd. is under the gun to find a buyer as quickly as possible as the embattled technology company concedes the sale process itself is likely scaring away customers. [...] In its regulatory filings Tuesday night and its earnings report last Friday, BlackBerry highlights that the sale process is one of a number of negative factors weighing on the company [...] “The Company also believes that uncertainty surrounding its ongoing strategic review process may have negatively impacted demand for the company’s products in the second quarter of fiscal 2014.”

## Appendix 2 (continued on the following page)

### Variable Definitions

<b>Announcement</b>	
$ANNOUNCE_{i,t}$	=1 if firm $i$ announces strategic alternatives in year $t$ (announcement group), and =0 otherwise.
<b>Outcomes: Transactions</b>	
$ACQIYR_{i,t}$	=1 if firm $i$ is acquired within 365 days after the strategic alternatives announcement date or pseudo-announcement date. Acquisitions are identified using Compustat deletion reasons 1, 4, 6, 9; CRSP delisting code 2; and SDC ‘completed merger’ status with an effective date.
$LIQIYR_{i,t}$	=1 if firm $i$ is liquidated or bankrupted within 365 days after the strategic alternatives announcement date or pseudo-announcement date. Liquidations are identified using Compustat deletion reasons 2, 3; and CRSP delisting codes 4, 5, 6, if not conflicted with $ACQIYR$ .
<b>Outcomes: Returns</b>	
$MARET_{i,y+1}$	Market-adjusted buy-and-hold returns over a custom window from day -10 to day +252 (in trading days) after the announcement or pseudo-announcement date. If delisting occurs due to acquisition ( $ACQIYR=1$ ) or liquidation or bankruptcy ( $LIQIYR=1$ ) within one year, then the measurement window ends with the delisting return, without reinvestment. The CRSP value-weighted buy-and-hold return over the same window is subtracted.
$ARET12MO_{i,y+1}$	12-month CAPM risk-adjusted returns starting with the month of the announcement or pseudo-announcement. If delisting occurs within one year, then the last available 12 months of returns data comprises the return measurement window, so the window is consistently 12 months for all observations. $ARET12MO_{i,y+1} = \prod_{m=1}^{12} (1 + aret_{i,m}) - 1$ $aret_{i,m} = ret_{i,m} - r_m^f - \hat{\beta}_{i,y} (r_m^{mkt} - r_m^f)$ $\hat{\beta}_{i,y}$ is the estimated firm-year CAPM beta using monthly observations of firm $i$ during years $y-2$ , $y-1$ , and $y$ , where at least 10 observations are required for estimation: $(ret_{i,m} - r_m^f) = \alpha_{i,m} + \beta_{i,y} (r_m^{mkt} - r_m^f) + \varepsilon_{i,m}$ . Monthly market return $r_m^{mkt}$ is the CRSP value-weighted monthly return including dividends.
<b>Outcomes: Benefit mechanisms</b>	
$ABDOWNLOAD_{i,d}$	Abnormal downloads of firm $i$ 's Forms 10-K, 10-Q, and 8-K. Calculated as the number of downloads on day $t$ divided by the average number of downloads during the prior 365 days.
$NUMBIDDERS_{i,t}$	The number of unique bidders reported in SDC Platinum.
<b>Outcomes: Cost mechanisms</b>	
$AREV_{i,q+2}$	Future change in quarterly revenue, $REV_{iq+2} - REV_{iq-2}$
$\Delta OI_{i,q+2}$	Future change in quarterly operating income, $OI_{iq+2} - OI_{iq-2}$
$EMPGR_{i,y+1}$	Future annual percentage employee growth, $(EMP_{i,y+1} - EMP_{i,y}) / EMP_{i,y}$
<b>Control variables: Fundamentals</b>	
$ASSETS_{i,q}$	Total assets of firm $i$ at of the most recent quarter-end $q$ .
$MKVAL_{i,q}$	Market value of firm $i$ at of the most recent quarter-end $q$ , calculated as $PRCC\_F * CSHO$ .
$BTM_{i,q}$	Book-to-market ratio of common equity of firm $i$ at of the most recent quarter-end $q$ , calculated as market value to book value of equity.
$LEV_{i,q}$	Leverage of firm $i$ at of the most recent quarter-end $q$ , calculated as total liabilities over total assets.
$CASH_{i,q}$	Liquid cash and cash equivalents of firm $i$ at end of quarter $q$ , over total assets.
$INTAN_{i,q}$	Illiquid intangible assets of firm $i$ at end of quarter $q$ , over total assets.
$AROAI_{i,q}$	Year-over-year change in quarterly net income as a percentage of average total assets, calculated as $ROAI_{iq} - ROAI_{iq-4}$ .
$OI_{i,q}$	Quarterly operating income of firm $i$ for the most recent quarter $q$ , calculated as operating income before depreciation divided by average total assets.

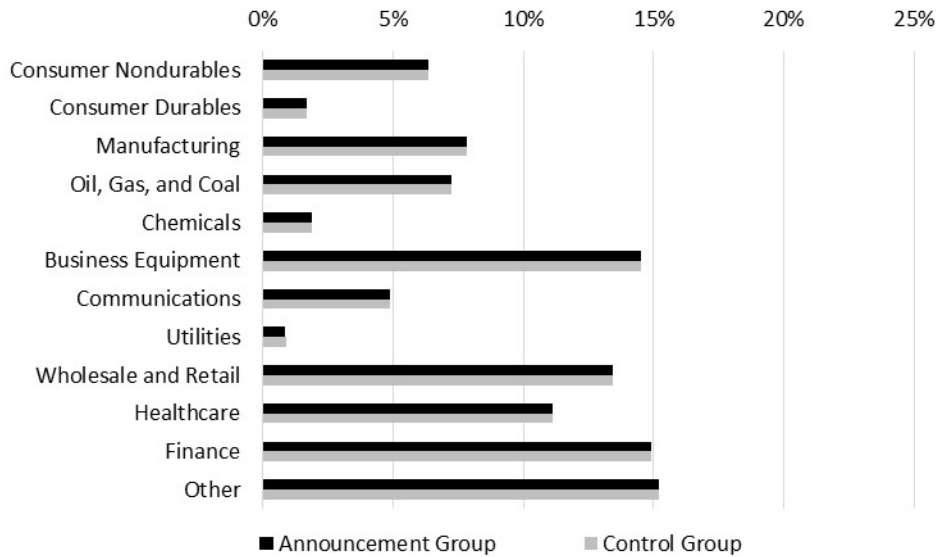


$REV_{i,q}$	Quarterly sales revenue of firm $i$ for the most recent quarter $q$ , calculated as total revenue divided by average total assets.
$CFO_{i,q}$	Quarterly cash flows from operations of firm $i$ for the most recent quarter $q$ , calculated as $OANCF$ scaled by average assets.
$CFI_{i,q}$	Quarterly cash flows from investing activities of firm $i$ for the most recent quarter $q$ , calculated as $IVNCF$ scaled by average assets.
$ACC_{i,q}$	Quarterly total operating accruals of firm $i$ for the most recent quarter $q$ , calculated as $(\Delta AT - \Delta CHE) - (\Delta LT - \Delta LCT - \Delta DLT)$ .
$EMPGR_{i,m}$	Annual percentage employee growth at the most recent year-end $y$ , calculated as $(EMP_{i,y} - EMP_{i,y-1}) / EMP_{i,y-1}$ .
<b>Control variables: Returns and risk</b>	
$BETA_{i,y}$	Estimated firm-year CAPM beta using monthly observations of firm $i$ during years $y-2, y-1$ , and $y$ , where at least 10 observations are required for estimation: $(ret_{i,m} - r_m^f) = \alpha_{i,m} + \beta_{i,y}(r_m^{mkt} - r_m^f) + \varepsilon_{i,m}$ .
$MARET_{i,y}$	12-month market-adjusted buy-and-hold returns ending with the month prior to the announcement or pseudo-announcement month. 12-month buy-and-hold CRSP value-weighted returns are subtracted.
<b>Control variables: Analysts</b>	
$EPSFORECAST_{i,m}$	Consensus analyst EPS growth forecast for firm $i$ at month $m$ , calculated as $(consensus\ EPS\ estimate_{i,m} - actual_{i,m-12}) / actual_{i,m-12}$ . Source: I/B/E/S.
$NUMANALYSTS_{i,m}$	Number of analysts following firm $i$ at month $m$ , calculated as the number of earnings forecasts used in determining the consensus estimate for fiscal year earnings. Source: I/B/E/S.
<b>Control variables: Ownership</b>	
$BLOCKHOLDER_{i,m}$	Institutional blockholders' ownership as a percent of shares outstanding, by asset managers with \$100+ million AUM and 5%+, for firm $i$ at the end of the most recent month $m$ before the announcement or pseudo-announcement. Source: Thomson Reuters Institutional Holdings.
$ACTIVIST_{i,m}$	Activists' ownership as a percent of shares outstanding, from 13-D filings for firm $i$ at the end of the most recent month $m$ before the announcement or pseudo-announcement. Source: Audit Analytics.
$INSIDER_{i,m}$	Insiders' shares held in firm $i$ at the end of month $m$ , as a percent of shares outstanding. Insiders are the CEO; CFO; CB: Chairman of the Board; D: Directors; Partners; DO: Director and Beneficial Owner; H: Officer Director and Beneficial Owner; OD: Officer and Director; and VC: Vice Chairman. Source: Thomson Reuters Insider Filing Data Table 1.
<b>Control variable: Managerial ability and bias</b>	
$MANAGERFE_{i,m}$	Managers' forecast error, calculated as $(manager's\ EPS\ forecast\ made\ closest\ to\ month\ m - actual) / actual$ . Source: I/B/E/S Guidance.
<b>Other</b>	
$P-SCORE_{i,t}$	<p>The propensity score is the fitted estimated from the maximum likelihood using a probit regression of the probability of seeking and announcing strategic alternatives on firm characteristics, where <math>\Phi</math> is the probit link function.</p> $P[ANNOUNCE_{it} = 1   X_1, firm\ characteristics; \beta_0, \dots, \beta_K]$ $= \Phi(\beta_0 + \sum_{k=1}^K \beta_k firm\ chars_k)$ <p>Using logit instead of probit does not significantly change estimates, based on Akaike's Information Criterion (AIC) and Bayesian Information Criterion (BIC) statistics.</p>

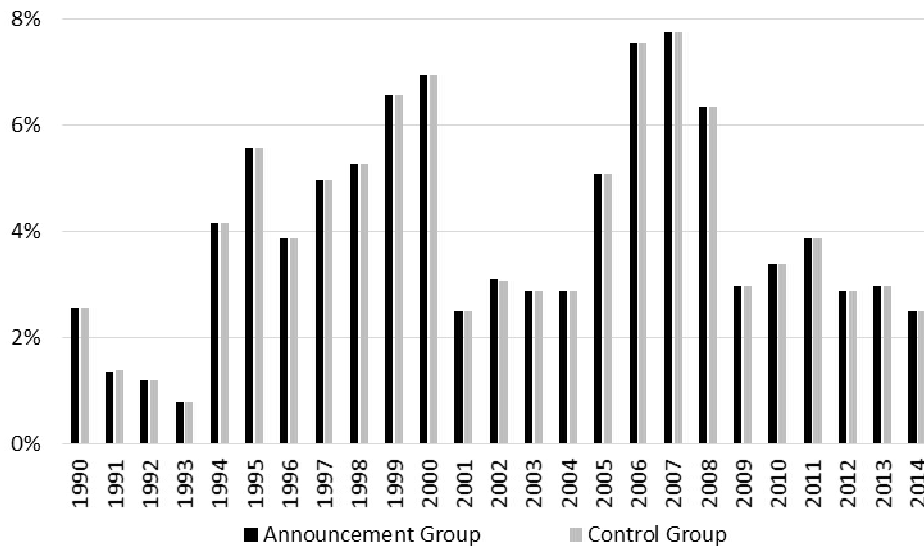
**Figure 1**

**Industry and Year Distributions of the Announcement and Control Groups**

**Panel A: By industry**



**Panel B: By year**



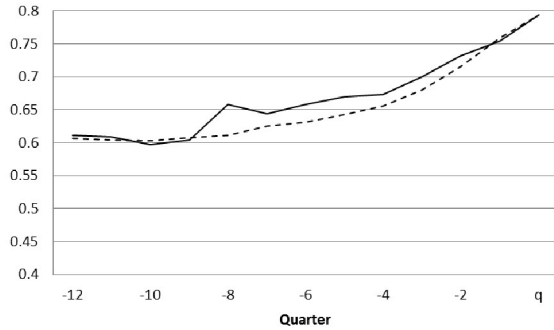
Notes: Panel A depicts the distributions of the announcement group (*ANNOUNCE*=1) in black and the control group (*ANNOUNCE*=0) in grey over the 12 Fama-French industries. Panel B depicts the distribution of the announcement group and control group over the years 1990 to 2014. Control firms are from the same 48 Fama-French industry-years as the announcement firms, and are weighted so that the control group has the same distributions of industries, years, and firm covariates as the announcement group.

**Figure 2**

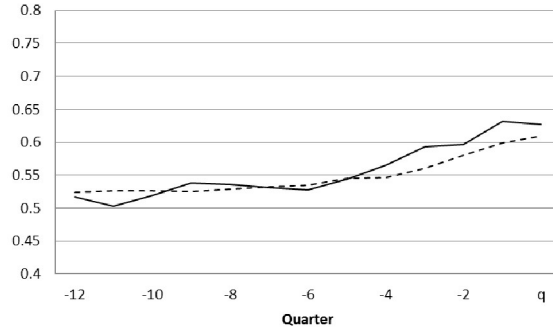
**Firm Characteristics of the Announcement and Control Groups**

— Announcement Group      - - - - - Control Group

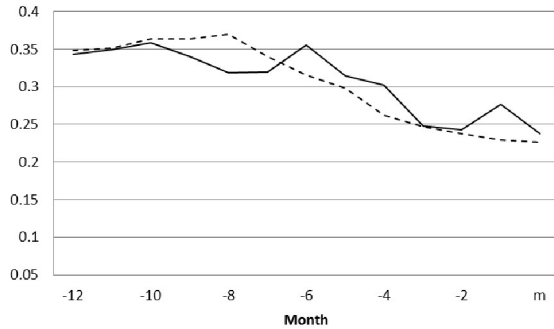
**Panel A: Book-to-market, mean**



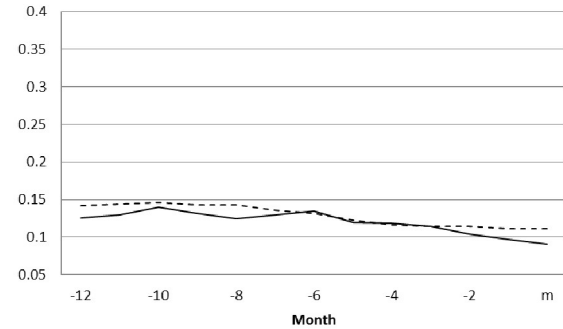
**Panel B: Book-to-market, median**



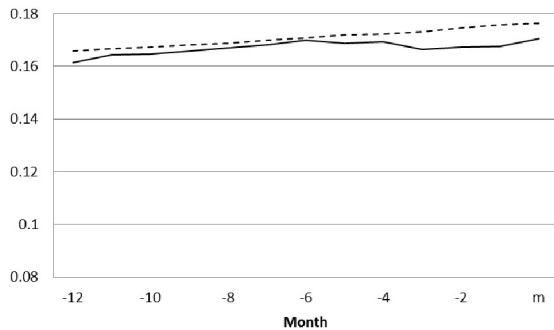
**Panel C: Analysts' EPS forecast, mean**



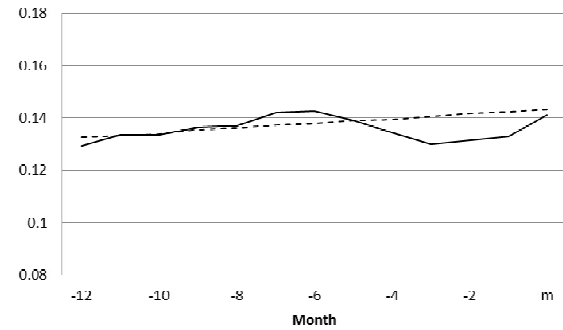
**Panel D: Analysts' EPS forecast, median**



**Panel E: Institutional ownership %, mean**



**Panel F: Institutional ownership %, median**



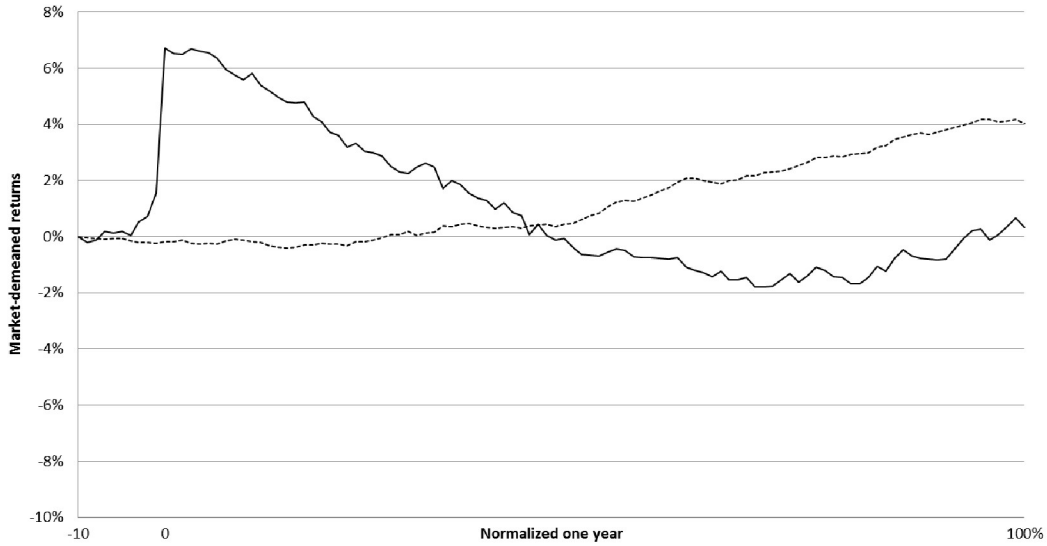
Notes: This figure depicts the antecedent time series of selected firm characteristics of the announcement group ( $ANNOUNCE=1$ ) and control group ( $ANNOUNCE=0$ ). Panel A (B) presents the mean (median) book-to-market ratio. Panel C (D) presents the mean (median) analysts' EPS forecast. Panel E (F) presents the mean (median) institutional ownership percentage.

**Figure 3**

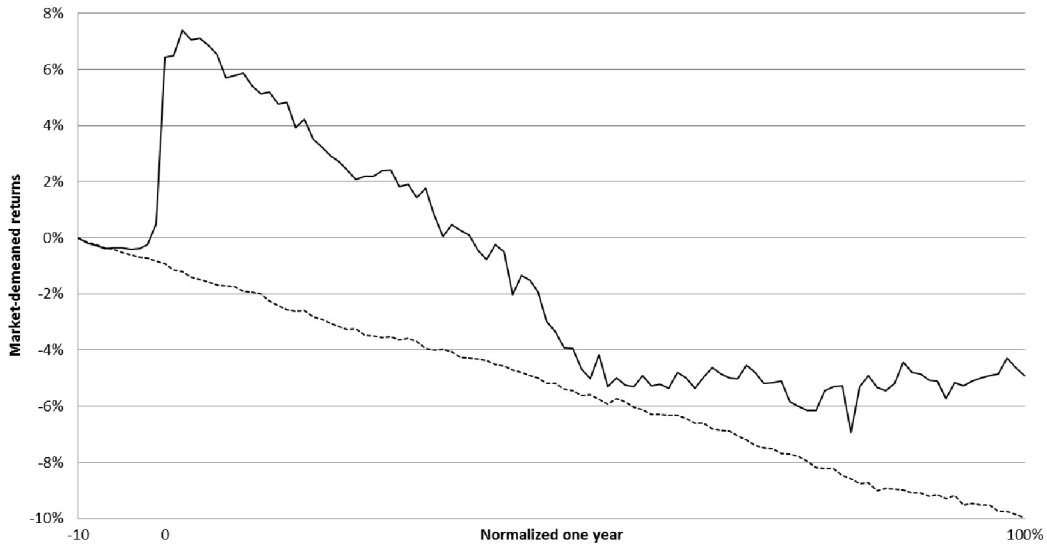
**Market-adjusted Returns**

— Announcement Group    - - - - Control Group

**Panel A: Mean market-adjusted returns**



**Panel B: Median market-adjusted returns**



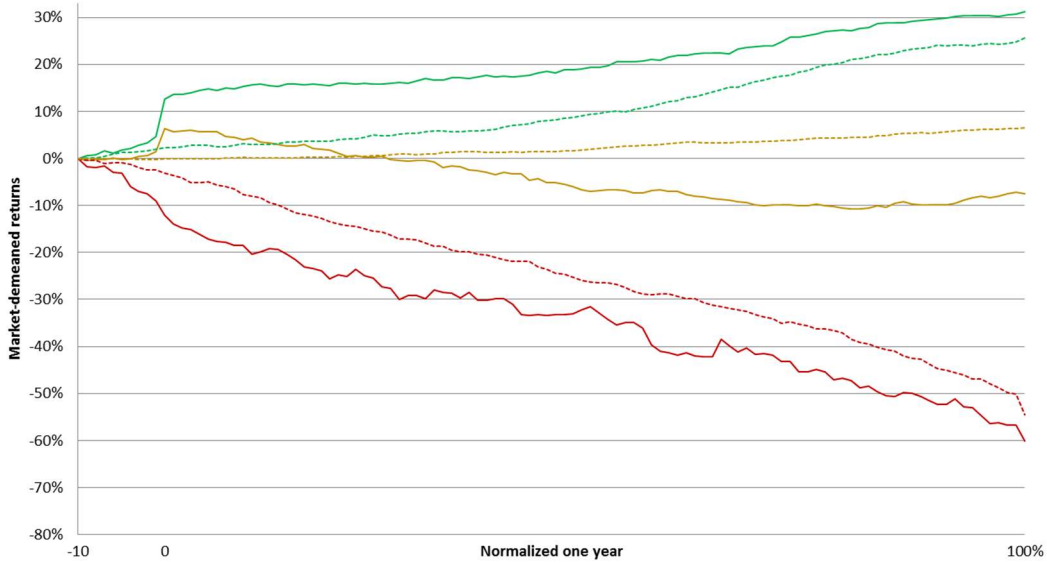
Notes: Market-adjusted returns are buy-and-hold daily returns measured from day -10 to day +252 (or sooner if delisted) relative to the announcement date or pseudo-announcement date. I subtract out the CRSP value-weighted return over the same period for each observation. Panel A (B) presents the mean (median) portfolio returns of the announcement group (*ANNOUNCE*=1) and control group (*ANNOUNCE*=0). [-10, d] refers to day -10 to the announcement or pseudo-announcement date. [d, 100%] represents a normalized period for each observation, where 100% is day +252 or the delisting date, if sooner. The announcement group contains 1,006 observations from 1990 to 2014. The control group is comprised of 63,454 peer observations from the same FF 48 industry-years and satisfies the ignorable treatment assignment assumption.

Figure 4

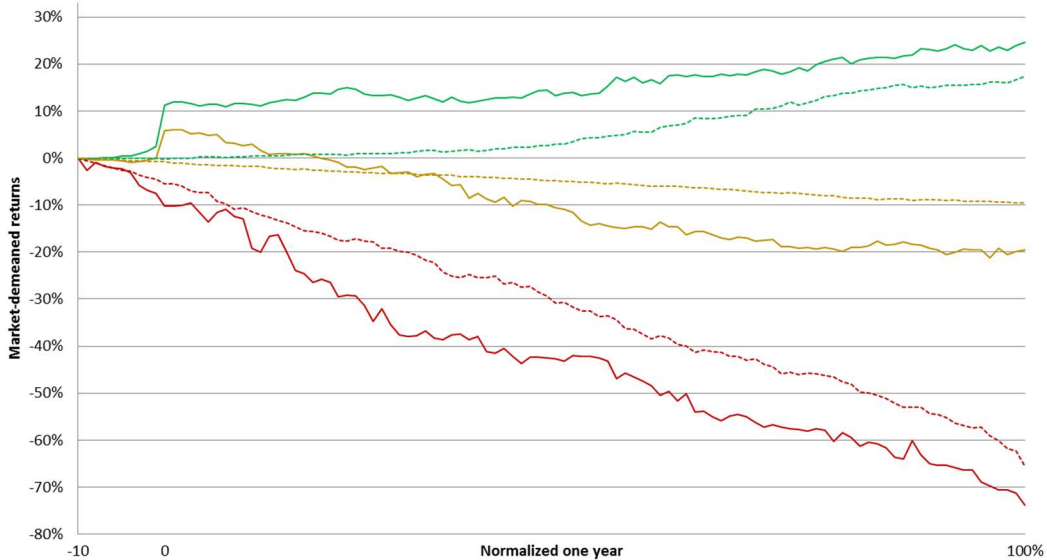
Market-adjusted Returns Conditional on Future Transactional Outcomes

— Announcement Group, Acquired      — Announcement Group, Liquidated      — Announcement Group, Independent  
- - - Control Group, Acquired      - - - Control Group, Liquidated      - - - Control Group, Independent

Panel A: Mean market-adjusted returns, conditional on future outcomes



Panel B: Median market-adjusted returns, conditional on future outcomes



Notes: Market-adjusted returns are buy-and-hold daily returns are measured from day -10 to day +252 (or sooner if delisted) relative to the announcement date or pseudo-announcement date. I subtract out the CRSP value-weighted return over the same period for each observation. Panel A (B) presents the mean (median) portfolio returns of the announcement group ( $ANNOUNCE=1$ ) and control group ( $ANNOUNCE=0$ ), conditional on three future transactional outcomes: getting acquired, getting liquidated, and remaining independent.  $[-10, d]$  refers to day -10 to the announcement or pseudo-announcement date.  $[d, 100\%]$  represents a normalized period for each observation, where 100% is day +252 or the delisting date, if sooner. The announcement group contains 1,006 observations from 1990 to 2014. The control group is comprised of 63,454 peer observations from the same FF 48 industry-years and satisfies the ignorable treatment assignment assumption.

Table 1 (continued on the following page)

Empirical Distributions

Panel A: Announcement group ( $ANNOUNCE=1$ ) and control group ( $ANNOUNCE=0$ )

	Announcement Group $ANNOUNCE=1$						Control Group $ANNOUNCE=0$					
	N	Mean (a)	SD	Min	Median	Max	N	Mean (b)	SD	Min	Median	Max
$ASSETS_{i,q}$	1,006	1,112	3,556	1.062	215	47,802	63,454	1,025	2,909	1.073	221	47,446
$MKVAL_{i,q}$	1,006	597	1,739	1.284	113	26,149	63,454	568	1,612	1.290	115	26,135
$BTM_{i,q}$	1,006	0.794	0.857	-4.332	0.627	6.678	63,454	0.794	0.857	-4.332	0.609	6.678
$LEV_{i,q}$	1,006	0.570	0.282	0.028	0.563	1.518	63,454	0.570	0.282	0.028	0.561	1.518
$CASH_{i,q}$	1,006	0.152	0.205	0.000	0.061	0.944	63,454	0.153	0.205	0.000	0.060	0.944
$INTAN_{i,q}$	1,006	0.085	0.169	0.000	0.000	0.752	63,454	0.085	0.169	0.000	0.000	0.783
$\Delta ROA_{i,q}$	1,006	-0.014	0.082	-0.604	-0.002	0.457	63,454	-0.014	0.082	-0.604	-0.000	0.453
$REV_{i,q}$	964	0.248	0.216	0.000	0.197	1.239	54,527	0.255	0.220	0.000	0.206	1.239
$CFO_{i,q}$	1,006	-0.003	0.073	-0.337	0.007	0.184	63,454	-0.003	0.073	-0.337	0.006	0.184
$CFI_{i,q}$	1,006	-0.013	0.059	-0.380	-0.008	0.247	63,454	-0.015	0.060	-0.379	-0.008	0.247
$ACC_{i,q}$	1,006	-0.008	0.105	-0.587	-0.000	0.476	63,454	-0.008	0.105	-0.587	0.000	0.476
$EMPGR_{i,y}$	950	0.084	0.470	-0.645	0.000	4.727	55,539	0.081	0.478	-0.662	0.006	4.727
$BETA_{i,m}$	1,006	1.123	1.000	-1.394	0.993	4.318	63,454	1.123	1.000	-1.394	1.012	4.318
$RET_{i,y}$	1,006	-0.213	0.529	-1.152	-0.283	4.041	63,454	-0.212	0.530	-1.152	-0.260	3.995
$EPSFORECAST_{i,m}$	581	0.238	1.607	-3.286	0.091	8.200	32,669	0.226	1.647	-3.286	0.111	8.200
$NUMANALYSTS_{i,m}$	658	4.941	4.880	1.000	3.000	28.000	38,124	4.915	5.023	1.000	3.000	29.000
$MANAGERFE_{i,m}$	334	0.834	1.899	-1.000	0.119	10.000	19,187	0.894	2.041	-1.000	0.089	10.000
$ MANAGERFE_{i,m} $	334	0.953	1.866	0.000	0.219	10.167	19,187	1.050	2.026	0.000	0.214	10.167
$BLOCKHOLDER_{i,m}$	847	0.170	0.157	0.000	0.141	0.581	47,958	0.176	0.163	0.000	0.143	0.581
$ACTIVIST_{i,m}$	378	0.181	0.182	0.000	0.113	0.994	15,737	0.190	0.215	0.000	0.103	0.994
$INSIDER_{i,m}$	800	0.092	0.178	0.000	0.019	1.000	51,315	0.092	0.177	0.000	0.023	1.000
$P-SCORE_{i,t}$	1,006	-1.996	0.343	-3.087	-1.998	-0.651	63,454	-1.996	0.365	-4.230	-2.014	-0.514

**Table 1 (continued)**

**Panel B:** Differences in means between the announcement group ( $ANNOUNCE=1$ ) and control group ( $ANNOUNCE=0$ )

	Variable is explicitly balanced	<i>T</i> -test <i>p</i> -value	<i>T</i> -test significance
		(b) – (a)	(b) – (a)
$ASSETS_{i,q}$	Yes	0.443	.
$MKVAL_{i,q}$	Yes	0.599	.
$BTM_{i,q}$	Yes	0.988	.
$LEV_{i,q}$	Yes	0.986	.
$CASH_{i,q}$	Yes	0.993	.
$INTAN_{i,q}$	Yes	0.997	.
$\Delta ROA_{i,q}$	Yes	0.996	.
$REV_{i,q}$	Yes	0.304	.
$CFO_{i,q}$	Yes	0.997	.
$CFI_{i,q}$	Yes	0.332	.
$ACC_{i,q}$	Yes	0.996	.
$EMPGR_{i,y}$	Yes	0.881	.
$BETA_{i,m}$	Yes	0.999	.
$RET_{i,y}$	Yes	0.981	.
$EPSFORECAST_{i,m}$	Yes	0.865	.
$NUMANALYSTS_{i,m}$	Yes	0.895	.
$MANAGERFE_{i,m}$	Yes	0.584	.
$ MANAGERFE_{i,m} $	No	0.371	.
$BLOCKHOLDER_{i,m}$	Yes	0.291	.
$ACTIVIST_{i,m}$	No	0.318	.
$INSIDER_{i,m}$	Yes	0.947	.
$P-SCORE_{i,t}$	No	0.971	.

Notes: Panel A presents the empirical distributions of key variables for the announcement group ( $ANNOUNCE=1$ ) and control group ( $ANNOUNCE=0$ ). Panel B presents *t*-tests of the differences in means between the announcement group ( $ANNOUNCE=1$ ) and control group ( $ANNOUNCE=0$ ). The announcement group contains 1,006 observations from 1990 to 2014. The control group is comprised of 63,454 peer observations from the same FF 48 industry-years and satisfies the ignorable treatment assignment assumption. \*\*\*, \*\* and \* denote statistical significance at the 1, 5 and 10 percent levels, respectively, from *t*-tests of differences in means, but there are no statistically significant results. See Appendix 2 for variable definitions.

**Table 2**

**Market-adjusted Returns [-10, +252]**

		Announcement Group Mean (median) (a)		Control Group Mean (median) (b)	T-test of difference in means (b) – (a)
Outcomes	All outcomes	0.3% (-4.9%)  N=1,006	vs.	4.0%* (-10.0%)  N=63,454	$p=0.147$ .
	Acquired within 1 year <i>ACQIYR=1</i>	31.2%*** (24.6%)  N=329	vs.	25.6%*** (17.3%)  N=3,320	$p=0.156$ .
	Remained independent <i>ACQIYR=0&amp;LIQIYR=0</i>	-7.5%** (-19.4%)  N=585	vs.	6.4%** (-9.5%)  N=58,236	$p=0.000$ ***
	Liquidated within 1 year <i>LIQIYR=1</i>	-60.1%*** (-73.9%)  N=92	vs.	-54.5%*** (-65.6%)  N=1,898	$p=0.192$ .

Notes: Market-adjusted returns are buy-and-hold daily returns measured from day -10 to day +252 (or sooner if delisted) relative to the announcement date or pseudo-announcement date. I subtract out the CRSP value-weighted return over the same period. This table presents the mean (median) portfolio returns of the announcement group (*ANNOUNCE=1*) and control group (*ANNOUNCE=0*), conditional on future transactional outcomes. Firms are either acquired (*ACQIYR=1*), liquidated or bankrupted (*LIQIYR=1*), or continuing as independent entities. \*\*\*, \*\* and \* denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. The announcement group contains 1,006 observations from 1990 to 2014. The control group is comprised of 63,454 peer observations from the same FF 48 industry-years and satisfies the ignorable treatment assignment assumption. See Appendix 2 for variable definitions.



**Table 3 (continued on the following page)**

**Valuation Consequences of Announcing**

**Panel A:** Market-adjusted returns [-10, +252]

	Pred.	Dependent variable = $MARET_{it+1}$	
		(1)	(2)
<i>Intercept</i>		0.064 (1.56)	N/A due to F.E.
<i>ANNOUNCE<sub>it</sub></i>	-	<b>-0.140<sup>***</sup></b> <b>(-2.66)</b>	<b>-0.149<sup>***</sup></b> <b>(-2.78)</b>
<i>ACQIYR<sub>it</sub></i>	+	0.192 <sup>***</sup> (5.97)	0.184 <sup>***</sup> (5.62)
<i>ACQIYR<sub>it</sub></i> * <i>ANNOUNCE<sub>it</sub></i>	+	<b>0.196<sup>***</sup></b> <b>(3.71)</b>	<b>0.240<sup>***</sup></b> <b>(4.07)</b>
<i>LIQIYR<sub>it</sub></i>	-	-0.609 <sup>***</sup> (-14.68)	-0.661 <sup>***</sup> (-9.62)
<i>LIQIYR<sub>it</sub></i> * <i>ANNOUNCE<sub>it</sub></i>		0.084 (1.27)	0.062 (1.02)
Control variables		No	Yes
Fixed effects		No	FF 12 & year
Clustered SEs		FF 48 & year	FF 48 & year
Observations		64,460	64,460
Adj. R <sup>2</sup>		0.062	0.127

**Table 3 (continued)**

**Panel B: Risk-adjusted 12-month future returns**

	Pred.	Dependent variable = $ARET12MO_{i,y+1}$	
		(1)	(2)
<i>Intercept</i>		0.038 (1.25)	N/A due to F.E.
<i>ANNOUNCE<sub>i,t</sub></i>	-	<b>-0.140<sup>***</sup></b> <b>(-3.64)</b>	<b>-0.144<sup>***</sup></b> <b>(-3.64)</b>
<i>ACQIYR<sub>i,t</sub></i>	+	0.097 <sup>***</sup> (2.62)	0.091 <sup>**</sup> (2.46)
<i>ACQIYR<sub>i,t</sub></i> * <i>ANNOUNCE<sub>i,t</sub></i>	+	<b>0.266<sup>***</sup></b> <b>(4.68)</b>	<b>0.276<sup>***</sup></b> <b>(4.52)</b>
<i>LIQIYR<sub>i,t</sub></i>	-	-0.759 <sup>***</sup> (-18.79)	-0.725 <sup>***</sup> (-13.64)
<i>LIQIYR<sub>i,t</sub></i> * <i>ANNOUNCE<sub>i,t</sub></i>		0.074 (1.30)	0.086 <sup>*</sup> (1.87)
Control variables		No	Yes
Fixed effects		No	FF 12 & year
Clustered SEs		FF 48 & year	FF 48 & year
Observations		64,460	64,460
Adj. R <sup>2</sup>		0.106	0.150

Notes: This table presents the regressions of future returns on the announcement variable (*ANNOUNCE*), *ex-post* transactional outcome variables (*ACQIYR* and *LIQIYR*), and their interactions. In Panel A, returns are the market-adjusted buy-and-hold returns measured from day -10 to day +252 (trading days) relative to the announcement or pseudo-announcement date. If delisting occurs within one year, then the return window ends with the delisting return. In Panel B, returns are the future 12-month CAPM risk-adjusted returns starting with the month of the announcement or pseudo-announcement. If delisting occurs within one year, then the terminal 12 months of returns are used, in order to maintain a consistent measurement window for all observations. In Column (2) of both panels, control variables are  $\ln(MKVAL)$ , *BTM*, *LEV*, *CASH*, *INTAN*,  $\Delta ROA$ , *CFO*, *CFI*, *ACC*, *BETA*, and  $MARET_{i,y}$ . Standard errors are clustered by FF 48 industries and years. *T*-statistics are in parentheses. <sup>\*\*\*</sup>, <sup>\*\*</sup> and <sup>\*</sup> denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. The announcement group contains 1,006 observations from 1990 to 2014. The control group is comprised of 63,454 peer observations from the same FF 48 industry-years and satisfies the ignorable treatment assignment assumption. See Appendix 2 for variable definitions.

**Table 4**

**Evidence of Specific Benefits from Announcing**

**Panel A: Future abnormal EDGAR downloads**

	Pred.	Dependent variable = $ABDOWNLOAD_{i,t+10}$			
		Coefficient (1)	Marginal effect (2)	Coefficient (3)	Marginal effect (4)
<i>Intercept</i>		0.085*** (4.13)	.	N/A due to F.E.	.
$ANNOUNCE_{i,t}$	+	<b>0.480***</b> <b>(4.07)</b>	0.684	<b>0.472***</b> <b>(3.43)</b>	0.672
$ABDOWNLOAD_{i,t-10}$				0.040*** (4.43)	0.057
Control variables		No		Yes	
Fixed effects		No		FF 12 & year	
Clustered SEs		FF 48		FF 48	
Observations		25,698		25,698	
Predicted incidence rate at the margin					
$ANNOUNCE_{i,t}=0$		1.088		1.093	
$ANNOUNCE_{i,t}=1$		1.760		1.753	

**Panel B: Number of bidders in the M&A process**

	Pred.	Dependent variable = $NUMBIDDERS_{i,t}$			
		Coefficient (1)	Marginal effect (2)	Coefficient (3)	Marginal effect (4)
<i>Intercept</i>		0.128*** (8.85)		N/A due to F.E.	
$ANNOUNCE_{i,t}$	+	<b>0.066***</b> <b>(2.91)</b>	0.080	<b>0.067***</b> <b>(2.63)</b>	0.081
Control variables		No		Yes	
Fixed effects		No		FF 12 & year	
Clustered SEs		FF 48 & year		FF 48 & year	
Observations		5,435		5,435	
Predicted incidence rate at the margin					
$ANNOUNCE_{i,t}=0$		1.171		1.171	
$ANNOUNCE_{i,t}=1$		1.251		1.252	

Notes: Panel A presents the results of GLM regressions using a log link of abnormal EDGAR downloads 10 days after the announcement or pseudo-announcement date.  $ABDOWNLOAD$  is the number of daily downloads of firm  $i$  divided by its average daily downloads during the preceding 365 days. Panel B presents results of poisson regressions of the number of bidders in the final round of the M&A sale process,  $NUMBIDDERS$ . In Column (3) of both panels, control variables are  $\ln(MKVAL)$ ,  $BTM$ ,  $LEV$ ,  $CASH$ ,  $INTAN$ ,  $\Delta ROA$ ,  $CFO$ ,  $CFI$ ,  $ACC$ ,  $BETA$ , and  $MARET_{i,y}$ . In Panel A, standard errors are clustered by FF 48 industry. In Panel B, standard errors are clustered by FF 48 industry and year. Z-statistics are in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. See Appendix 2 for variable definitions. The sample consists of observations in the announcement group and control group where required variables are non-missing.

**Table 5 (continued on the following page)**

**Evidence of Specific Costs from Announcing**

**Panel A: Future changes in revenues**

	Pred.	Dependent variable = $\Delta REV_{i,q+2}$	
		(1)	(2)
<i>Intercept</i>		0.002* (1.67)	N/A due to F.E.
<i>ANNOUNCE<sub>i,t</sub></i>	-	<b>-0.007**</b> <b>(-2.03)</b>	<b>-0.007**</b> <b>(-2.14)</b>
<i>REV<sub>i,q</sub></i>		.	-0.014 (-0.95)
Control variables		No	Yes
Fixed effects		No	FF 12 & year
Clustered SEs		FF 48 & year	FF 48 & year
N		51,394	51,368
Adj. R <sup>2</sup>		0.002	0.055

**Panel B: Future changes in operating income**

	Pred.	Dependent variable = $\Delta OI_{i,q+2}$	
		(1)	(2)
<i>Intercept</i>		-0.003*** (-2.74)	N/A due to F.E.
<i>ANNOUNCE<sub>i,t</sub></i>	-	<b>-0.012***</b> <b>(-3.81)</b>	<b>-0.012***</b> <b>(-3.48)</b>
<i>OI<sub>i,q</sub></i>		.	0.169*** (4.10)
Control variables		No	Yes
Fixed effects		No	FF 12 & year
Clustered SEs		FF 48 & year	FF 48 & year
N		59,351	59,136
Adj. R <sup>2</sup>		0.007	0.078

**Table 5 (continued)**

**Panel C: Future employee growth**

	Pred.	Dependent variable = $EMPGR_{i,y+1}$	
		(1)	(2)
<i>Intercept</i>		0.053*** (3.75)	N/A due to F.E.
$ANNOUNCE_{i,t}$	-	<b>-0.038***</b> <b>(-2.89)</b>	<b>-0.034**</b> <b>(-2.20)</b>
$EMPGR_{i,y}$		.	-0.004 (-0.19)
Control variables		No	Yes
Fixed effects		No	FF 12 & year
Clustered SEs		FF 48 & year	FF 48 & year
N		50,474	46,385
Adj. R <sup>2</sup>		0.002	0.053

Notes: Panel A presents results of OLS regressions of future changes in seasonal quarterly revenues at quarter  $q+2$ , where  $\Delta REV_{i,q+2} = REV_{i,q+2} - REV_{i,q-2}$ . Panel B presents results of OLS regressions of future changes in seasonal operating income at quarter  $q+2$ , where  $\Delta OI_{i,q+2} = OI_{i,q+2} - OI_{i,q-2}$ . Panel C presents results of OLS regressions of the annual percentage employee growth in year  $t+1$ . In Column (2) of all panels, control variables are  $\ln(MKVAL)$ ,  $BTM$ ,  $LEV$ ,  $CASH$ ,  $INTAN$ ,  $\Delta ROA$ ,  $CFO$ ,  $CFI$ ,  $ACC$ ,  $BETA$ , and  $MARET_{i,y}$ . Standard errors are clustered by FF 48 industry and year.  $T$ -statistics are in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. The sample consists of observations in the announcement group and control group where required variables are non-missing. See Appendix 2 for variable definitions.

**Table 6**

**Market-adjusted Returns [-10, +252]  
Using an Alternate Control Group**

		Modified Announcement Group Mean (median) (a)		Media Leak Group as Control Group Mean (median) (c)	T-test for difference in means (c) – (a)
Outcomes	All outcomes	0.2% (-5.6%)  N=986	vs.	11.2%** (3.1%)  N=151	$p=0.066$ *
	Acquired within 1 year <i>ACQIYR=1</i>	32.0%*** (26.0%)  N=316	vs.	30.8%*** (25.9%)  N=60	$p=0.888$ .
	Remain independent <i>ACQIYR=0&amp;LIQIYR=0</i>	-7.5%*** (-19.8%)  N=578	vs.	-1.0% (-13.1%)  N=90	$p=0.415$ .
	Liquidated within 1 year <i>LIQIYR=1</i>	-60.1%*** (-73.9%)  N=92	vs.	-66.8%  N=1	$p=0.097$ *

Notes: Market-adjusted returns are buy-and-hold daily returns measured from day -10 to day +252 (or sooner if delisted) relative to the announcement date or pseudo-announcement date. I subtract out the CRSP value-weighted return over the same period. This table presents the mean (median) portfolio returns of the modified announcement group (which excludes 20 observations that also experienced media leaks) and the media leak group, conditional on future transactional outcomes. Firms are either acquired (*ACQIYR=1*), liquidated or bankrupted (*LIQIYR=1*), or continuing as independent entities. \*\*\*, \*\* and \* denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. There are 20 observations in the announcement group that also experienced media leaks, and are hence removed from the modified announcement group. The modified announcement group consists of 986 (1,006 less 20) observations from 1990 to 2014, and the media leak group consists of 151 observations. See Appendix 2 for variable definitions.

Table 7 (continued on the following page)

Falsification Tests Using an Alternate Control Group  
Valuation Consequences of Announcing

Panel A: Market-adjusted future returns [-10, +252]

	Pred.	Dependent variable = $MARET_{i,t+1}$	
		(1)	(2)
<i>Intercept</i>		-0.010 (-0.16)	N/A due to F.E.
<i>ANNOUNCE<sub>i,t</sub></i>	<b>0</b>	<b>-0.065</b> <b>(-0.76)</b>	<b>-0.088</b> <b>(-0.84)</b>
<i>ACQ1YR<sub>i,t</sub></i>	+	0.318*** (2.76)	0.351** (2.52)
<i>ACQ1YR<sub>i,t</sub></i> * <i>ANNOUNCE<sub>i,t</sub></i>	<b>0</b>	<b>0.077</b> <b>(0.61)</b>	<b>0.080</b> <b>(0.51)</b>
<i>LIQ1YR<sub>i,t</sub></i>	-	-0.658*** (-9.86)	-0.627*** (-5.18)
<i>LIQ1YR<sub>i,t</sub></i> * <i>ANNOUNCE<sub>i,t</sub></i>		0.132 (1.35)	0.061 (0.54)
Control variables		No	Yes
Fixed effects		No	FF12 & year
Clustered SEs		FF48 & year	FF48 & year
Observations		1,137	1,137
Adj. R <sup>2</sup>		0.105	0.168

**Table 7 (continued)**

**Panel B: Risk-adjusted 12-month future returns**

	Pred.	Dependent variable = $ARET12MO_{i,t+1}$	
		(1)	(2)
<i>Intercept</i>		-0.064 (-1.29)	N/A due to F.E.
<i>ANNOUNCE<sub>i,t</sub></i>	<b>0</b>	<b>-0.040</b> <b>(-0.69)</b>	<b>-0.048</b> <b>(-0.56)</b>
<i>ACQIYR<sub>i,t</sub></i>	+	0.341*** (3.03)	0.336*** (2.65)
<i>ACQIYR<sub>i,t</sub></i> * <i>ANNOUNCE<sub>i,t</sub></i>	<b>0</b>	<b>0.032</b> <b>(0.27)</b>	<b>0.036</b> <b>(0.27)</b>
<i>LIQIYR<sub>i,t</sub></i>	-	-0.754*** (-15.37)	-0.564*** (-5.96)
<i>LIQIYR<sub>i,t</sub></i> * <i>ANNOUNCE<sub>i,t</sub></i>		0.072 (0.78)	-0.023 (-0.20)
Control variables		No	Yes
Fixed effects		No	FF12 & year
Clustered SEs		FF48 & year	FF48 & year
Observations		1,137	1,137
Adj. R <sup>2</sup>		0.179	0.226

Notes: In these falsification tests, the media leak group serves as the control group, and I expect to not find and do not find that valuation consequences to announcing differ between the treatment group and alternate control group. This table presents the regressions of future returns on the announcement variable (*ANNOUNCE*), *ex-post* transactional outcome variables (*ACQIYR* and *LIQIYR*), and their interactions. In Panel A, returns are the market-adjusted buy-and-hold returns measured from day -10 to day +252 (trading days) relative to the announcement or pseudo-announcement date. If delisting occurs within one year, then the return window ends with the delisting return. In Panel B, returns are the future 12-month CAPM risk-adjusted returns starting with the month of the announcement or pseudo-announcement. If delisting occurs within one year, then the terminal 12 months of returns are used, in order to maintain a consistent measurement window for all observations. In Column (2) of both panels, control variables are  $\ln(MKVAL)$ , *BTM*, *LEV*, *CASH*, *INTAN*,  $\Delta ROA$ , *CFO*, *CFI*, *ACC*, *BETA*, and  $MARET_{i,y}$ . Standard errors are clustered by FF 48 industries and years. *T*-statistics are in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. There are 20 observations in the announcement group that also experienced media leaks, and are hence removed from the modified announcement group. The modified announcement group consists of 986 (1,006 less 20) observations (*ANNOUNCE*=1) from 1990 to 2014, and the media leak group consists of 151 observations (*ANNOUNCE*=0). See Appendix 2 for variable definitions.