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Economic Consequences of Announcing Strategic Alternatives: A Voluntary Disclosure's Benefits and Costs

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Abstract

This study examines the benefits and costs to a company of publicly announcing that it is seeking a potential sale or merger. I find that the announcement leads to increased market attention and a more robust M&A sales process—the benefits of improved transparency. However, I also find evidence of the announcement alienating stakeholders and increasing business disruption—the costs of credible disclosure. I document the countervailing valuation effects of these benefits and costs, where the net valuation effect depends on whether the company is subsequently acquired. This research is important because it (i) demonstrates the disclosure's impact on the company through multiple channels, (ii) estimates the valuation effects, and (iii) identifies key considerations for investors and other stakeholders who bear the consequences of such a disclosure.

Keywords: corporate disclosure; strategic alternatives; mergers and acquisitions; disclosure benefits; disclosure costs; information dissemination; 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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1. Introduction

During the preliminary stages, a company that is exploring its potential sale or merger is said to be evaluating “strategic alternatives.”¹ If the process is publicly announced, the disclosure calls into question the company’s continued existence as a standalone entity and generates a 5% announcement return, making it among the most disruptive voluntary disclosures a company can make. However, it is not obvious whether a company should voluntarily disclose its evaluation of strategic alternatives and how such a disclosure impacts the company. Some practitioners view this disclosure as a desirable corporate communication, while others view it as a public admission of business problems that brings about negative consequences and advise keeping the process private. This study examines two research questions: What are the consequences of publicly revealing that a company is exploring its potential sale, and how do the benefits and costs ultimately impact shareholder value?

Theoretically, announcements of strategic alternatives are ideal voluntary disclosures to study because their institutional features match the assumptions of traditional disclosure models (Verrecchia 1983; Dye 1985; Jung and Kwon 1988; Shavell 1994; Pae 2002). First, these announcements reflect value-maximizing motivations, consistent with the typical manager objective function within these models. Second, the one-off nature of the announcements conforms to single-period models, where there are no repeated game considerations, such as pre-committing to a disclosure policy. Third, executives and directors periodically assess a firm’s strategic options and receive outreach from investment bankers or interested buyers, consistent with the model’s assumption that managers might be endowed with a private and imprecise information signal about

¹ “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.” Matthew Levine, “Allergan Is Open to Alternatives That Aren’t Valeant,” *Bloomberg*, October 7, 2014.

firm value (Jung and Kwon 1988). Fourth, as will be shown, the announcements are credible, and the models assume credible and truthful disclosure.

Empirically, the *single-period* and *binary* disclosure decision is relatively straightforward to measure and relate to meaningful future outcomes (Li 2010, p. 158).² News revealing that a firm is “in play” is consequential to market participants and other stakeholders. The firms making these announcements face extreme operational and competitive pressure and are entering a transformative period in their lives, so their announcements are critically informative to stakeholders. The uncertainty and information asymmetry in this setting further enhance the impact of this voluntary disclosure.

I begin by examining the content and fundamental market outcomes of 1,239 hand-collected strategic alternatives announcements made by public companies from 1990 to 2018. The announcements most commonly mention financial and legal advisors assisting the process, specific alternatives under consideration, and the rationale to enhance shareholder value. Then, using a matched and entropy-balanced control sample of peer firms to construct the counterfactual, I estimate the announcement’s effect on short-run stock returns (5% three-day returns), the probability of receiving an offer (32% increased probability), and the probability being acquired (26% increased probability). These findings support the announcement’s economic significance and credibility.

Second, I examine the announcement’s consequences for the company, considering multiple channels. With respect to the disclosure benefits, the announcement improves the transparency of the firm’s strategic alternatives process. In contrast to companies pursuing private strategic alternatives, by relying on a network of investment bankers, executives, and directors, companies

² In contrast, other voluntary disclosures, such as earnings announcements, management forecasts, conference calls, and textual characteristics, do not represent an independent and purely binary disclosure decision in a given period and are thus more complex to measure and associate with outcomes.

that publicly announce cast a wider net to all potential buyers, receive greater attention from investors and bidders, and participate in a more robust sales process. Specifically, I find that, compared to the counterfactual, announcing firms experience higher abnormal downloads of their SEC filings, more acquisition offers, more diverse bidders from different industries, higher deal values, and increased timeliness of receiving an offer. With respect to the disclosure costs, a public announcement can disrupt business operations by damaging stakeholders' perception of the company, and the subsequent public sale process can be more costly and involved and consume more resources. For example, senior executives can be constrained in managing the core business while they must respond to incrementally more inquiries from investors and potential bidders. Employees may shirk and even quit if they anticipate job cuts and an unwelcome change in corporate control and culture. Customers may be less likely to patronize a company because of concerns that product quality and customer service may decline. Specifically, I find that, compared to the counterfactual, announcing firms experience lower levels of and changes in operating performance (return-on-assets, operating income, and sales revenue) and lower employee growth, which indirectly reflect the disclosure costs. Overall, this voluntary disclosure reflects a particularly high cost-benefit trade-off.

Third, I estimate the impact of the benefits and costs on long-run firm value and find that firms that announce strategic alternatives experience a negative overall valuation effect that is 5.3% lower than the counterfactual. This negative effect is consistent with (i) the disclosure having to be costly to be credible and (ii) the threshold equilibrium of disclosure (e.g., Verrecchia 1983; Jung and Kwon 1988). I further disentangle the overall valuation effect into two countervailing valuation effects: a positive valuation premium that is conditional on a future acquisition—because only then do shareholders permanently realize the benefits from improved transparency and attention—and a negative valuation penalty that is unconditional. A company that chooses to disclose accepts the

valuation penalty (approximately -20%) to have an improved yet *uncertain* chance at attaining the acquisition-related valuation premium (approximately +29%) that might result in a *net* gain to shareholders. Documenting both effects is important because a significant expected valuation premium incentivizes some firms to disclose, while a significant valuation penalty maintains the disclosure's credibility and prevents all firms from disclosing (i.e., prevents the full unravelling result of Grossman, 1981).

Finally, I repeat my analyses using a sample of involuntary disclosures of strategic alternatives, representing times when an investment banker or another member of the deal team leaked information about the company to the press anonymously. The affected firms are selected in a plausibly exogenous manner. I use the media leaks sample as the control sample in falsification tests, where the consequences of voluntary disclosure, relative to involuntary disclosure, are not detected. In addition, I use the media leaks sample as an alternative treatment group to test for the consequences of involuntary disclosure. The supplementary analyses corroborate the main findings and suggest that involuntary and voluntary disclosures lead to similar consequences.

This study relies on a research design that varies the disclosure indicator variable across the treatment (i.e., announcing) and control (i.e., non-announcing) groups while holding constant other firm attributes that influence the propensity to seek *and* disclose strategic alternatives, including those that measure pre-treatment operating performance. Then observed differences in outcomes between the two groups can be attributed to the disclosure. However, differences in omitted and unobserved characteristics across the treatment and control groups, such as private information, may remain, even after matching and entropy balancing on a multitude of observable traits and proxies. Including regression controls and industry and year effects further mitigates but may not fully resolve this concern. The study cannot conclusively determine, for example, why, of two firms with identical observable backgrounds and trajectories, one chooses to announce while the other does

not. Thus, I cannot rule out unobservable and omitted explanations for the documented effects of disclosure (Rosenbaum and Rubin 1985, p. 35; Altonji et al. 2005; Shipman et al. 2017).

Nonetheless, this study answers Leuz and Wysocki's (2016) call for researchers to "improve and tighten" research designs and to "embrace new econometric methods of estimating treatment effects" (p. 532). This study also answers their call for researchers to provide "evidence on the causal effects of disclosure," which is "still relatively rare" because "studies often struggle to identify counterfactuals" (p. 529). In addition, this study quantifies the cost-benefit trade-off that eventually flows through to affect firm value, making progress on Leuz and Wysocki's assessment that "we are still far from being able to perform *quantitative* cost-benefit analyses" (p. 529).

Section 2 summarizes the literature. Section 3 develops the hypotheses. Section 4 describes the data and research design. Section 5 presents the results. Section 6 presents the supplementary analyses, and section 7 concludes.

2. Prior Literature

This study makes contributions to three distinct literatures, namely those on (i) the effects of voluntary disclosure, (ii) the impact of M&A targets' financial reporting on deal outcomes relevant to target shareholders, and (iii) firms that seek strategic alternatives.

A substantial voluntary disclosure literature finds various benefits and costs associated with management forecasts, conference calls, and disclosure quality (Healy and Palepu 2001; Beyer et al. 2010; Li 2010). However, few studies have analyzed the cost-benefit trade-offs of corporate disclosures (Leuz and Wysocki 2016). The disclosure research is "limited by incomplete analysis," focusing on "one aspect at the time" (Beyer et al. 2010, p. 314). Moreover, Beyer et al. (2010), Christensen (2012), and Lang and Sul (2014) have been puzzled by the magnitude of the documented benefits (e.g., lower cost of capital and greater liquidity) and the lack of direct evidence

on associated costs.³ Following the guidance from Beyer et al. (2010) and Wiedman (2000), recent research has attempted to address these limitations by examining both the benefits and the costs of corporate disclosure (Amel-Zadeh and Meeks 2019). Meanwhile, it remains difficult for researchers to assign monetary values to the costs and benefits (Schipper 2010), though the work of Lang and Lundholm (2000) is a notable exception. This study contributes to the literature by examining the unique benefits and costs of voluntary disclosure and the countervailing valuation effects in the context of the preliminary M&A sales process. The inherent uncertainty about a subsequent M&A transaction allows me to document both countervailing valuation effects.

A second related literature examines the effects of target firms' financial reporting attributes, including voluntary disclosure, on deal outcomes that are relevant to target shareholders. Research has focused on earnings forecasts (Brennan 1999) and various measures of financial reporting quality (Skaife and Wangerin 2013), such as accounting quality (Raman et al. 2013; Amel-Zadeh and Zhang 2015; Marquardt and Zur 2015; McNichols and Stubben 2015), financial report comparability (Chen et al. 2018), and stock return nonsynchronicity (Martin and Shalev 2017). These studies find that better target reporting quality improves the likelihood of deal completion, deal multiples, target announcement returns, combined target-and-acquirer announcement returns, and post-acquisition performance yet results in a lower acquisition premium.⁴ The current study builds on this literature by examining the effects of improved information about *potential* target firms on M&A outcomes such as deal completion and shareholder wealth for successful targets (Klein 2018). Moreover, the study expands the scope of this literature by examining a comprehensive set of M&A details affected by disclosure, including not only the probability of

³ Few papers actually document costs of voluntary disclosure (e.g., Houston et al. 2010).

⁴ Other papers examine the acquirer's disclosures (Shalev 2009; Ge and Lennox 2011; Kimbrough and Louis 2011; Ahern and Sosyura 2014; Goodman et al. 2014; Amel-Zadeh and Meeks 2019), the target's peers' disclosures (Chen et al. 2022), and other nondisclosure attributes of the target firm (Aktas et al. 2010; De Bodt et al. 2014).

receiving an offer and deal value but also the number of offers, the diversity of bidders from different industries, and the time to receive an offer.

The third related literature examines firms that seek to be acquired. Studies have documented the fundamental characteristics of firms that seek and announce strategic alternatives, finding that they are small firms with poor performance, low valuations, poor financial health, lower discretionary accruals, and greater conditional conservatism in the preceding and surrounding years (Boone and Mulherin 2003; Shen 2006; Oler and Smith 2014; Anagnostopoulou and Tsekrekos 2015). The latter two studies additionally examine the announcement returns and the firms' subsequent likelihood of being acquired. The present study builds on this literature by differentiating between the event of seeking strategic alternatives and its disclosure and by estimating causal effects.⁵ The antecedent firm characteristics documented in the prior studies underscore the importance of constructing an adjusted control group, so that the current study can attempt to isolate the effects of disclosure per se. In addition, the current study considers an expanded set of firm characteristics and outcomes, examines the content of the announcements, and uses a sample of involuntary, leaked announcements to aid inferences.

3. Hypotheses Development

A firm that evaluates strategic alternatives is a *potential* target firm. During a typical evaluation of strategic alternatives, its executives and directors assess the transactional landscape with the financial advisors, develop a preliminary valuation for the company, consider the various

⁵ Two tests overlap between the work of Oler and Smith (2014) and this study. Their Table 3 shows that a strategic alternatives indicator variable has incremental power in predicting takeover targets, and they conclude that the announcement increases the odds of receiving an offer, which I confirm. In their Table 5, they find that firms that sought strategic alternatives in the prior 12 months underperform their industry-size peers by about 21%, annualized. In contrast, I estimate the effect of *disclosing* strategic alternatives on future returns to be -5% over the subsequent one year (Table 6 panel A).

alternatives available,⁶ and approach potential buyers. The company's leaders must also decide whether to publicly announce the pursuit or keep silent and shop itself privately. While some firms voluntarily disclose their review of strategic alternatives, this is not a mandatorily reportable event under the SEC's Form 8-K disclosure requirements⁷ because seeking strategic alternatives does not mean a sale is imminent nor that a sales process will actually occur.⁸ Accordingly, the U.S. Supreme Court ruled that the duty to disclose depends on the materiality of the news and the probability that a transaction will be consummated (Bruner 2004, p. 693; *Basic v. Levinson* 1988), leaving discretion to the company's executives and directors in ascertaining, at a preliminary stage of the sales process, whether the company should publicly announce its strategic alternatives. While practitioners have differing views about whether the process should be publicly disclosed, empirical evidence of the disclosure's costs and benefits is limited to date.

3.1 Disclosure Benefits

To first establish the credibility of the disclosure of strategic alternatives (i.e., not “cheap talk,” Gigler 1994; Wiedman 2000), the study examines the disclosure's impact on short-run stock prices and M&A outcomes. A credible announcement signals the firm's commitment to maximizing shareholder value and willingness to pursue a transaction. Thus, a credible disclosure should lead to an immediate and positive stock price reaction and increase the likelihood of receiving an offer and completing a transaction. Traditional disclosure models (Verrecchia 1983; Jung and Kwon 1988;

⁶ An outright sale of the company and a business combination are the most desirable strategic alternatives because they generate the highest returns to shareholders. Less common alternatives include a spin-off, restructuring, refinancing, and recapitalization.

⁷ Form 8-K requirement Item 8.01 calls for other events not explicitly required to be the subject of voluntary disclosure if the issuer deems it important.

⁸ A potential buyer will sign confidentiality agreements, review the seller's confidential information memorandum, financial projections, and management presentation, and submit an indication of interest. One or more bidders may then continue to additional rounds of due diligence with access to data rooms and more advanced negotiations or an auction. Then, if a buyer and an agreement emerge, the parties sign a letter of intent, obtain regulatory and shareholder approval, and prepare the definitive merger agreement.

Shavell 1994) and the investor recognition hypothesis (Merton 1987; Lehavy and Sloan 2008) both support this positive shock to stock returns because the disclosure signals that the manager's private information exceeds some cost threshold and because the disclosure leads to greater investor recognition, respectively. Moreover, a credible disclosure should also improve the probability of receiving an offer and completing a transaction (Frankel 2005; Djerrahian et al. 2016; Frankle et al. 2019). Shavell's (1994) model supports this latter prediction, suggesting that disclosure improves the efficiency of the matching between an asset's buyer and seller and helps the seller attain the best outcome.

The disclosure benefits the firm by providing valuable information to investors and bidders about the firm's availability for M&A when information asymmetry and uncertainty are high. As a result, the disclosure (1) prompts investors to pay attention to the company and leads to greater information acquisition; (2) attracts as many potential buyers as possible, maximizing both the number of offers overall and those received from bidders from different industries than the target (Frankel 2005); (3) expedites the timeline of the sales process, by efficiently checking the market for potential interest and possible valuations, without committing to a formal auction or engaging in multiple one-on-one negotiations (Frankel 2005); and (4) allows the firm to pursue the largest deal value reasonably available.

The case of Eagle Hospitality Properties Trust illustrates the benefits of a public announcement. The company received measurably more interest from a diverse group of bidders after its public announcement on January 29, 2007, and succeeded in its sale. As part of the special committee's review of strategic alternatives, Morgan Stanley, Eagle's financial advisor, initially contacted 17 strategic buyers and 32 financial buyers. Following Eagle's announcement of strategic alternatives, Morgan Stanley had contact with an additional four strategic buyers and 13 financial

buyers that made unsolicited inquiries.⁹ Eagle was ultimately acquired by a consortium of three financial buyers six-and-a-half months after its announcement of strategic alternatives, for a premium of 42% over Eagle's closing stock price before the announcement.

Hypothesis 1 predicts that the announcement of strategic alternatives produces information benefits, generating attention for the company and inciting action from market participants.

HYPOTHESIS 1. Compared to the counterfactual, the announcement of strategic alternatives leads to a positive stock market reaction, an increased probability of receiving a bid and being acquired, greater information acquisition by investors, more offers, greater diversity of bidders from different industries, a higher value offer, and a timelier offer.

3.2 Disclosure Costs

In the presence of capital market benefits, significant disclosure costs must exist (Verrecchia 1983) to persuade some companies to keep their strategic alternatives process private. For instance, some companies prioritize the secrecy of the process by relying on private networks to contact potential buyers and requiring deal team members to use code names to refer to potential deals. Some of these private processes are revealed by media leaks and by mandatory M&A announcements and filings when there was no preemptive announcement of strategic alternatives.

I hypothesize that the costs of disclosure arise from the following nonmutually exclusive mechanisms (Frankel 2005). First, the announcement creates a negative public perception that damages the company's relationship with stakeholders, such as customers, employees, and other business partners. The announcement reveals that the company's performance is expected to reduce or decline, that shareholder stakes can be maximized by selling rather than by continuing to operate the business as a standalone entity, and that the company lacks resources for continued growth.

⁹ Details of Eagle's sales process can be found in its definitive proxy statement (DEF 14A) filed on July 3, 2007.

Customers may be alienated due to the uncertainty about continued product offerings and quality and the apparent threat of a potential transaction, resulting in lower sales. Employees may anticipate an unwelcome change in corporate culture and policies, job security and function, and compensation, resulting in departures of both management and rank-and-file employees. Business partners, such as suppliers, may hesitate to continue doing business with a company that may not continue as a going concern.

Second, a public process is more disruptive to business operations than a private one. For executives, who assist with the M&A sales process, guiding a potential strategic transaction can be viewed as a distraction (Frankel 2005). In cases where the strategic alternatives process is public, managing increased interest from more potential bidders is likely to further distract them from focusing on the core business (Djerrahian et al. 2016).

Third, a public process is more involved and expensive. Financial and legal advisor fees will be higher with a more involved, public process and will lower the company's income.¹⁰ For these three reasons, the announcing firm may experience abnormally lower future operating performance and employee growth.

As an example, BlackBerry publicly announced it was seeking strategic alternatives on August 12, 2013. It later admitted that the public process alienated its customers and other stakeholders and hurt sales. BlackBerry warned investors about "risks related to BlackBerry's ongoing strategic review process [that] may impact BlackBerry's business, existing and future relationships with business partners and customers, and ability to attract and retain key employees." One analyst commented: "What do you expect when you announce you're up for sale? Who wants

¹⁰ For example, Eagle Hospitality Properties Trust reported \$0.6 million of operating expenses related to its strategic alternatives process in the notes section of its Form 10-Q from March 31, 2007. However, for many firms, this expense is not disclosed separately.

to commit to a platform that could possibly be shut down?” Another analyst opined that the voluntary strategic alternatives announcement might have been a PR mistake.¹¹

Hypothesis 2 predicts that announcing strategic alternatives harms firm operations, due to alienating stakeholders, such as customers and employees, and greater disruption and expenses that accompany a public process.

HYPOTHESIS 2. Compared to the counterfactual, the announcement of strategic alternatives results in lower return-on-assets, operating income, sales revenue, changes in these measures, and lower employee growth.

There is tension in this hypothesis because disclosing strategic alternatives could generate a positive perception of the company by allowing it to take control of its corporate messaging and improve its relationships with stakeholders. The announcement may place the company under less intense public scrutiny. The announcement could also preempt rumors and speculation, avert surprise and concern from stakeholders upon a future M&A announcement, and appease any activist shareholders.

3.3 Long-run Valuation Effects

The aforementioned benefits and costs are various mechanisms by which disclosure impacts long-run firm value. To estimate the valuation effects of the benefits and costs, I examine the total long-run stock returns (i.e., the announcement return plus the post-event return). A longer horizon captures all value-relevant information and allows any initial uncertainty or mispricing to resolve. Despite the positive announcement return and the announcements’ frequent references to enhancing shareholder value, it would be premature to conclude that the valuation effect of the benefits

¹¹ These insights are obtained from the following sources. (i) BlackBerry’s earnings announcement on September 20, 2013. (ii) Euan Roca, “BlackBerry warns of big loss, 4,500 job cuts; shares dive,” *Reuters*, August 20, 2013. (iii) Joshua Brustein, “Outmoded BlackBerry a tough sell,” *SFGATE*, August 12, 2013.

outweighs that of the costs. A negative overall valuation impact would be consistent with the threshold equilibrium of disclosure where valuation costs prohibit some firms from disclosing (Christensen 2012; Beyer et al. 2010). Additionally, managers and investors may overestimate the disclosure's benefits resulting in a transitory positive announcement return that becomes negative in the long run (Rim and Zha Giedt 2023).

I also disaggregate the overall valuation impact of disclosure into two countervailing valuation effects that stem from the benefits and costs. A valuation premium results from the benefits of improved transparency and market attention in Hypothesis 1, as wider information dissemination attracts optimal buyers willing to pay for greatest synergy with the target, and the mere threat of rival bids creates a contestable market with competitive offers (Boone and Mulherin 2008; Aktas et al. 2010). However, these benefits related to improved attention and transparency translate into permanent shareholder gains *only if* the subsequent M&A is successful (Savor and Lu 2009; Malmendier et al. 2016). On the other hand, the costs in Hypothesis 2 translate into a valuation penalty unconditionally. All announcing firms face increased disruption to their operating performance, which then hurts shareholder value. While managers disclose when they expect the benefits to outweigh the costs, it remains uncertain whether an acquisition will materialize and shareholders will capture the valuation premium. The non-acquired firms will experience a reversal of the initial positive announcement reaction, resulting in long-run negative returns reflecting the unabated disclosure costs.

For example, BlackBerry's stock gained 10.5% on August, 12, 2013, the first trading day after its weekend announcement of strategic alternatives. The company was ultimately not acquired, and its 12-month stock return from August 9, 2013 to August 12, 2014 was -3.6%, whereas the S&P 500 gained 14.3% during that period.

Hypothesis 3 focuses on the relation between announcing strategic alternatives and long-run stock returns.

HYPOTHESIS 3. Compared to the counterfactual, the announcement of strategic alternatives results in negative long-run returns overall, which can be separated into a valuation premium captured only by the subsequently acquired firms and a valuation penalty that affects all announcing firms.

4. Data and Basic Research Design

To construct my sample of strategic alternatives announcements, I searched DirectEdgar for 8-K Filings and Factiva for company press releases.¹² The searches included various combinations of the following key words and phrases: 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, and value. I also collected announcements based on information in SDC Platinum where the target firm is “seeking a buyer.” Then I manually reviewed each announcement to exclude search results that are false positives: M&A offer announcements, merger announcements (of a definitive agreement), announcements where only a division or limited assets are up for sale, and announcements of fire sales during bankruptcy. To the extent that my manual collection missed some strategic alternatives observations and that some treatment observations are in the control group, my results would likely be understated.

The hand-collected sample consists of 1,239 disclosures by publicly traded firms from 1990 to 2018. I hand code 17 descriptive attributes of the disclosures’ content, which are not mutually

¹² 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*, MarketWatch and Reuters News.

exclusive, organized into four categories: the reason the company is seeking strategic alternatives, details about the process, specific types of alternatives under consideration, and contemporaneous information about firm performance. Table 1 describes the content of the announcements. 63% of the announcements state that the objective of the strategic alternatives evaluation is to maximize shareholder value, 82% mention that a financial or legal advisor is assisting, 78% use the “strategic” modifier, and 65% specifically state that the sale of the company is under consideration. After merging with the required Compustat and CRSP variables, the announcement sample shrinks to 1,008 observations.

The announcement of strategic alternatives ($ANNOUNCE_{i,t}$) is an indicator variable and the independent variable of interest. I obtain quarterly financial data from Compustat, price data from CRSP, ownership data from Thomson Reuters, M&A deal data from SDC Platinum,¹³ shareholder activism data from Audit Analytics, analyst and management forecasts from I/B/E/S, and risk-free rates and asset pricing risk factors from Kenneth French’s website. I require the following variables to be nonmissing: total assets ($ASSETS_{i,q-1}$), market value of equity ($MVE_{i,q-1}$), book-to-market ratio ($BTM_{i,q-1}$), leverage ($LEV_{i,q-1}$), cash and equivalents ($CASH_{i,q-1}$), seasonal change in quarterly return-on-assets ($\Delta ROA_{i,q-1}$), quarterly cash flows from operations ($CFO_{i,q-1}$), quarterly operating accruals ($ACC_{i,q-1}$), prior 12-month returns ($MDRET_{i,t-1}$), and CAPM beta ($BETA_{i,y-1}$). Appendix 1 contains the variable definitions. All variables except returns are winsorized at the 1 and 99 percent tails.

To estimate the announcement’s various consequences, I compare the observed outcomes of the announcement group to the potential outcomes of an adjusted control group following the causal inference framework of Rubin (2004, 2005, 2007, 2008) and Imbens and Rubin (2015). The adjusted

¹³ Barnes et al. (2014) note that SDC Platinum understates the total number of offers and bidders because the data is based on only the publicly observed offers.

control firms are poorly performing and similar to the treated firms along multiple dimensions that would make them likely to evaluate and disclose strategic alternatives—except they do not disclose.¹⁴ To form the adjusted control group, I use matching and entropy balancing, which results in substantially similar covariate distributions across the treated and control groups and limits sensitivity of inferences to subsequent modeling choices (Rubin 2001). First, the matching procedure selects four non-announcing firms from the same industry, month and year,¹⁵ and book-to-market quartile, with the closest log of market capitalization for each announcing firm. This matching criterion resembles that of Martin and Shalev (2017) and is consistent with Rubin’s (2010) advice to discard control units that are so unlike any treatment unit that they cannot serve as points of comparison. Then I apply entropy balancing (Hainmueller 2012; Hainmueller and Xu 2013) to create a weighted, synthetic control group that achieves covariate balance on an extensive set of covariates.¹⁶ Lastly, I assign each control observation a pseudo-announcement date, following the distribution of actual announcement dates.

The differences between the actual outcomes of the treatment group and potential outcomes of the adjusted control group are attributed to the effects of disclosure.¹⁷ Two assumptions are required for causal inference: (i) the stable unit treatment value assumption (SUTVA) and (ii) the

¹⁴ The goal of the initial research design is to make the treatment assignment “ignorable” or “as good as randomly assigned” with respect to a rich set of covariates (Rubin 2007, 2010; Diamond and Sekhon 2012). Covariates used in the initial research design stage (i.e., for matching, entropy balancing, and estimating the propensity score) must be measured prior to treatment assignment (Rubin 2005, 2007, 2008, 2010).

¹⁵ Control observations are matched by month and year, so that the measurement window for the prior 12-month returns will match ($MDRET_{i,t-1}$). Moreover, a control firm cannot be selected if it is a treatment firm in an adjacent year.

¹⁶ Entropy balancing assigns a weight to each control observation of $0 < w_i < 1$ that minimizes the differences across the treatment and control groups’ covariate means in expectation and such that $\sum_{i=1}^{4,032} w_i = 1,008$. Entropy balancing is “doubly robust” when used alongside propensity score matching or regression, meaning that causal inference does not rely on any single method and is correct if at least one method is effective (Zhao and Percival 2017).

¹⁷ Formally, the conditional independence statement, $y_{i0}, y_{i1} \perp T_i \mid X$, means that the distribution of the potential outcomes (y_{i0}, y_{i1}) is the same across treatment and control groups, $T_i=1$ and $T_i=0$, upon conditioning on the covariates X . Then I use the adjusted control group to estimate the counterfactual or potential outcome: $E[Y_i(0) \mid T_i=1]$. Finally, the effect of disclosure is, formally, the “average treatment effect on the treated,” $ATT = E[Y_i(1) - Y_i(0) \mid T_i=1] = E[Y_i(1) \mid T_i=1] - E[Y_i(0) \mid T_i=1]$.

conditional ignorability of treatment assignment (Imbens and Rubin 2015). Assumption (ii) requires the treatment assignment to be as good as random after controlling for covariates and is the main empirical challenge to inferring effects of *voluntary* disclosure, which arises from companies' self-selection (Balakrishnan et al. 2014, p. 2238). Despite the research design achieving covariate balance on a comprehensive set of firm characteristics, results attributed to omitted or unobservable factors cannot be ruled out. If the reader is not persuaded that the two aforementioned assumptions for causal inference are satisfied (e.g., Imbens and Rubin 2015), then the results can at least be interpreted as a non-causal association between announcing strategic alternatives and its related benefits, costs, and long-run stock returns.

Table 2 presents the covariate balance that results from the matching and entropy-balancing procedures, where the adjusted control group appears indistinguishable *ex-ante* from the announcement group along multiple dimensions: fundamentals; performance trajectory; future performance expectations; market risk; prior stock performance; information environment; managers' ability, bias, and incentives; institutional, activist, and insider stock ownership; executives' out-of-the-money option holdings;¹⁸ governance and monitoring; and the propensity to seek and disclose strategic alternatives (Rubin 2008; Diamond and Sekhon 2012; Hainmueller 2012; Hainmueller and Xu 2013). Figure 1 shows that the treatment and control groups share the same distributions of industries and years, which should mitigate confounding effects due to M&A merger waves and other industry- and time-varying market conditions (Andrade et al. 2001).¹⁹

¹⁸ Holding out-of-the-money options affects managers' incentives and risk preferences (Hayes 2004). If a manager holds out-of-the money stock options, he may be incentivized to issue a voluntary disclosure of strategic alternatives (Murphy 1999) and pursue a merger more forcefully (Li et al. 2022) in attempt to recover the value of his underwater options.

¹⁹ I use the Fama-French 48-industry classification when selecting the control firms but present the 12-industry distribution in Figure 1 for brevity. I use the 12-industry classification for entropy balancing and regression fixed effects.

5. Empirical Tests and Results

5.1 Disclosure Benefits (H1)

Following Hypothesis 1, I test whether disclosure leads to specific benefits from improved transparency and attention that are reflected in the actions of investors and bidders.

$$Benefit_{i,t} = \beta_0 + \beta_1 ANNOUNCE_{i,t} + \sum_{k=2}^K \beta_k Controls_{i,t} + \varepsilon_{i,t} \quad (1)$$

In the first set of tests of disclosure benefits, the dependent variable is one of the following: three-day stock returns (*3DAYRET*), an indicator variable if an M&A offer is received within one year (*BIDIYR*), or an indicator variable if a transaction is consummated within one year (*ACQIYR*). These tests also serve to verify the announcement's perceived and actual credibility. I select a one-year window to examine future outcomes, consistent with Anagnostopoulou and Tsekrekos's (2015) finding that most deals are completed within one year of the announcement.

Moreover, the specific content of the announcements may differentially predict the market reaction and the probability of receiving an offer and of being acquired. Mentioning the retention of financial or legal advisor(s) to assist in the process, that a sale or merger are under consideration, that the rationale is to enhance shareholder value, and other details may provide incrementally positive signals to investors and predict a more probable M&A transaction. For example, since financial advisors are only paid if the transaction is consummated, mentioning an advisor in the announcement may improve the anticipated and actual success of the sale.

Results in Table 3 panel A indicate that the announcement is credible and interpreted as such by investors. Column (1) shows that the announcement causes a three-day price reaction of 5.4%. Column (2) shows that investors react more positively when the announcement mentions maximizing shareholder value as the rationale; indications of preliminary interest; the presence of a financial or legal advisor; and that the "sale of the company" is under consideration. Investors react

more negatively when the announcement mentions executive or director turnover; the consideration of “financial” alternatives, meaning recapitalization or restructuring; earnings news or earnings guidance, which are often negative and thus bundled with the positive strategic alternatives announcement; and curtailment, which could include layoffs and store or plant closures. In column (3), the estimated marginal effect of 0.324 on *ANNOUNCE* suggests that the announcement increases the probability of receiving an M&A offer in the subsequent year by 32.4%. Column (4) shows that bundling the announcement with earnings news or guidance with the announcement and mentioning preliminary interest are significantly and positively associated with receiving an offer. In column (5), the estimated marginal effect of 0.264 on *ANNOUNCE* suggests that the announcement increases the probability of being acquired in the subsequent year by 26.4%.²⁰ Column (6) shows that the probability of being acquired is greater when the announcement mentions that the firm has received indications of interest or an unsolicited (and rejected) offer. The probability is lower when the announcement mentions financial alternatives or the sale of part of the company, such as a business division.

Panel B presents the proportions of announcing and non-announcing firms that receive a bid and are acquired: 40.9% of announcing observations receive a bid compared to the 6.7% counterfactual (an increase of 34.2%); and 31.6% of announcing observations are subsequently acquired compared to the 5.0% counterfactual (an increase of 26.6%). These univariate comparisons provide similar estimates to the marginal effects from the multivariate regressions in panel A.

Next I test whether specific channels detect increased interest and attention from investors and bidders. In these regressions, the dependent variable is one of the following: the abnormal daily

²⁰ To address the concern that announcing firms have already received more interest and possibly an offer before the announcement, I include a control variable for the number of bids received in the prior 20 trading days. Inferences remain consistent in this robustness check.

downloads of the company’s 10-K, 10-Q, and 8-K filings from EDGAR (*ABDOWNLOAD*) 10 days after the announcement, the number of bids received (*NUMBID*), the proportion of bidders from different industries (*DIFFINDBID*), the log of deal value in millions of dollars (*DEALVAL*), and the number of days until an offer is received (*DAYSUNTILBID*).

The results in Table 4 columns (1) and (2) suggest that announcing results in sustained abnormal downloads of the company’s EDGAR filings by market participants 10 trading days after the announcement. In untabulated tests, the effect is stronger when abnormal downloads are measured closer to the announcement date. Columns (3) through (6) support the prediction that disclosure results in increased attention and offers from bidders, including those from different industries than the target’s industry. Columns (7) and (8) provide some support for the prediction that announcing strategic alternatives leads to a higher deal value. Finally, results in columns (9) and (10) suggest that announcing strategic alternatives leads to a timelier offer.

This evidence is consistent with the announcement serving as a public advertisement of a firm’s availability for a transaction, where the information reaches all investors and potential buyers, prompts action, and results in a more robust M&A sale process.

5.2 Disclosure Costs (H2)

Following Hypothesis 2, I test whether announcing strategic alternatives leads to abnormally worse operating performance and employee growth, which indirectly reflect damaged relationships with stakeholders, greater distraction from business-as-usual, and a more involved and expensive public process.

$$Cost_{i,t} = \beta_0 + \beta_1 ANNOUNCE_{i,t} + \sum_{k=2}^K \beta_k Controls_{i,t} + \varepsilon_{i,t} \quad (2)$$

The dependent variable is one of the following measures of future operating performance: (1) quarterly return-on assets, $ROA_{i,q+1}$; (2) its seasonal change, $\Delta ROA_{i,q+1}$; (3) quarterly revenue scaled

by assets, $REV_{i,q+1}$; (4) its seasonal change, $\Delta REV_{i,q+1}$; (5) quarterly operating income scaled by assets, $OI_{i,q+1}$; (6) its seasonal change, $\Delta OI_{i,q+1}$; or (7) annual employee growth rate, $EMPGR_{i,y}$.

I graph the time series of $ROA_{i,q}$, $REV_{i,q}$, $OI_{i,q}$, and $EMPGR_{i,y}$ in Figure 2. The parallel trends assumption appears to be satisfied based on the similar operating trends of the treatment and control groups preceding the announcement. Figure 2 also raises a potential alternative explanation for the divergence in operating performance after the announcement. The announcing firms may continue to experience poor performance, while the control firms mean-revert, which I address in Table 5.

Table 5 presents the results of regressions of future operating measures on the announcement indicator variable and lagged operating measures. Across all of the operating performance measures, the coefficient estimates on *ANNOUNCE* are negative and statistically significant, consistent with the hypothesized costs of disclosure. Compared to the counterfactual, the announcing firms' future return-on-assets (*ROA*) is 1.0% lower and its change is 1.2% lower; future sales (*REV*) are 0.8% lower and its change is 0.9% lower; future operating income (*OI*) is 0.6% lower and its change is 0.7% lower; and future annual employee growth (*EMPGR*) is 10.4% lower. I control for the parallel trends assumption by inserting prior quarters' operating performance as independent variables in the regression. I also include interaction terms between the announcement indicator and lagged performance variables to control for the alternative explanation of the control firms' mean reversion.²¹

A limitation of these results is that the measures of disclosure costs are indirect since other firm activities unrelated to the announcement's consequences could affect operating performance.

²¹ I credit an anonymous reviewer for this suggestion. Including interaction terms in the regression allows for different time series persistence of the performance measure across the announcing and control groups. The results on the interaction terms are not presented for brevity but can be provided upon request.

For example, the announcing firms could subsequently lay off more employees compared to the counterfactual.

5.3 Long-run Valuation Effects (H3)

Following Hypothesis 3, I test for the impact of disclosure on long-run firm value. First, I regress buy-and-hold stock returns on the announcement indicator variable.

$$Returns_{i,t} = \beta_0 + \beta_1 ANNOUNCE_{i,t} + \varepsilon_{i,t} \quad (3)$$

According to Barber et al. (1999), the advantage of using buy-and-hold returns is that they accurately represent the investor experience and capture the full consequence of a disclosure on firm value. Any initial uncertainty or mispricing is resolved in the long run. I use two measures of returns to affirm that results are consistent: (i) buy-and-hold market-demeaned returns, $MDRET_{i,t}$, measured from trading day -10, to capture any pre-announcement leakage, to trading day 252 following the announcement date or pseudo-announcement date for control firms; and (ii) buy-and-hold risk-adjusted abnormal returns, $ABRET_{i,t}$, measured for the 12 months beginning with the announcement or pseudo-announcement month (Brown and Warner 1985). For both measures, the measurement window ends with the delisting return if the firm is acquired, goes bankrupt, or is liquidated within the year. Subtracting out the market return in (i) and using abnormal returns in (ii) alleviate concerns that the measurement window length varies for each observation, which would be a concern with using raw returns.

Figure 3 depicts the mean and median market-demeaned buy-and-hold returns. The announcement generates a 5.1% one-day return and 5.4% three-day return.²² Subsequently, the announcing firms' stock prices decline, and, by six months, have largely reverted to the counterfactual stock performance. At the end of one year, in panel A, the mean market-demeaned

²² The one-day and three-day counterfactual announcement returns are approximately zero.

stock returns of the announcement group underperform the counterfactual mean by 5.3% (0.1% for treatment versus 5.4% counterfactual). In panel B, the median market-demeaned returns of announcement group as a whole outperform the counterfactual median by 2.7% (-4.9% treatment versus -7.6% counterfactual). I present graphs of both mean and median returns because I do not winsorize stock returns. Nonetheless, the striking post-announcement stock price decline appears in both panels.

Table 6 panel A column (1) presents the corresponding regression results suggesting an average net valuation penalty of -5.3% from disclosure using market-demeaned returns, corroborating the magnitude from Figure 3 panel A. Column (5) suggests a net valuation penalty of -4.5% using risk-adjusted returns. There are two insights from this result. First, the net valuation effect of disclosure is negative, which prevents over-disclosure and is consistent with the threshold equilibrium. Second, the economic magnitude is not overbearingly negative such that it would dissuade all companies from announcing strategic alternatives.

Next I test for the countervailing valuation effects of the benefits and costs, where the conditional valuation benefit is only captured firms that are eventually acquired and the valuation cost affects all disclosing firms. I regress long-run returns on the announcement indicator variable, the acquisition indicator variable (which indicates whether a transaction was completed in the following one year), and their interaction.

$$\begin{aligned}
 Returns_{i,t} = & \beta_0 + \beta_1 ANNOUNCE_{i,t} + \beta_2 ACQ1YR_{i,t} \\
 & + \beta_3 ANNOUNCE_{i,t} * ACQ1YR_{i,t} + \sum_{k=4}^K \beta_k Controls_{i,t} + \varepsilon_{i,t}
 \end{aligned} \tag{4}$$

Here it becomes important to distinguish between *gross* and *net* valuation effects. In the data, one observes the net effect—the sum of the conditional gross valuation benefit, if any, and the unconditional gross valuation cost. Then I estimate the countervailing gross effects. The coefficient

on *ANNOUNCE*, β_1 , is the unconditional gross valuation cost, which also equals the net valuation effect that the non-acquired announcing firm experiences because it does not experience the offsetting benefit. Meanwhile, announcing firms that are eventually acquired experience the *net* effect, $\beta_1 + \beta_3$. β_3 is the estimated gross valuation benefit from disclosure, conditional on an acquisition. In the regression, *ACQIYR* is a mechanism “on the causal pathway” for the announcement to affect returns, and the coefficient β_3 reflects this pathway.²³

Figure 4 graphs the net valuation effects. Panel A (panel B) depicts the mean (median) long-run stock returns for the announcement and control groups, separately by eventual acquisition status. The mean valuation penalty of disclosure appears to be -19.8%, (-15.4% treatment versus 4.4% counterfactual; the difference between the solid and dashed orange lines). All announcing firms are subject to this valuation cost, even though I only observe it for the subset of non-acquired firms. For a firm that announces strategic alternatives but is not acquired, its shares experience a temporary bump from the announcement, but, as investors realize that no transaction is materializing, the company’s shares reflect the unabated costs of disclosure, and the stock price slides. In contrast, the announcing firms that are acquired experience the netted valuation benefit and cost. The mean net valuation premium for the acquired firms appears to be 9.6% (33.5% treatment versus 23.9% counterfactual; the difference between the solid and dashed green lines). I then infer that the *gross* valuation benefit of disclosure to acquired firms is 29.4%, such that the 29.4% valuation benefit and the -19.8% valuation cost net to 9.6%.

The estimates presented in Table 6 panel A column (2) corroborate the countervailing valuation effects from Figure 4. The coefficient on *ANNOUNCE* suggests that publicly announcing

²³ Disclosure can result in a valuation premium by improving the probability of acquisition and the acquisition premium magnitude. Rubin (2005) refers to *ACQIYR* as a “concomitant” variable and, in these instances, advises researchers to analyze the outcome as a bivariate outcome variable, $\{Returns, ACQIYR\}$, which I do in Figure 4 and Table 6.

strategic alternatives entails a -19.8% valuation penalty. The coefficient on *ANNOUNCE*ACQIYR* suggests a *gross* valuation benefit of 29.4% for the firms that are acquired. Summing the countervailing estimates together suggests a 9.6% net valuation effect for the acquired firms, consistent with Figure 4 panel A.²⁴ The regression also estimates the counterfactual takeover-related returns to shareholders to be 19.5%.²⁵ The additional columns in panel A add control variables, industry and year effects, and an indicator variable for firms that subsequently go bankrupt or are liquidated; include two-way clustered standard errors; and use risk-adjusted abnormal stock returns. Inferences remain consistent.

Panel B presents the estimates of the *net* valuation effects of disclosure for the separate samples of firms that are subsequently acquired and not acquired. In column (1), the positive coefficient of 0.096 (or 9.6%) suggests that the valuation benefit of disclosure more than offsets the valuation cost if the firm is sold and reconciles to the countervailing valuation effects estimated in panel A column (2) (-19.8% + 29.4%). The statistically insignificant coefficient suggests that the valuation cost and benefit offset each other so their sum is not statistically different from zero. In column (5), the estimated net valuation penalty experienced by announcing firms that are not acquired is -19.8%, corroborating panel A column (2) and is statistically significant. The remaining columns in panel B include control variables and industry and year effects, implement two-way clustered standard errors, and use risk-adjusted abnormal returns. Inferences remain consistent.

²⁴ In Table 6, the countervailing valuation effects of disclosure in column (2) can be reconciled to the net valuation effect of -5.3% in column (1) as follows. The net effect of disclosure (-5.3%) is the sum of (i) the valuation cost (-19.8%) that affects all disclosing firms, (ii) the “normal” takeover-related returns plus excess takeover-related returns from disclosure (19.5%+29.4%) times the proportion of firms that were additionally acquired due to announcing (0.264 from Table 3 column 5), and (iii) the excess returns from disclosure (29.4%) times the proportion of firms that would have been acquired under either treatment arm (0.050 from Table 3 panel B). In sum, $-19.8\% + (19.5\%+29.4\%)*0.264 + 29.4\%*0.050 = -5.4\%$ with a 0.1% rounding error. A similar calculation can reconcile columns (5) and (6).

²⁵ At first glance, a 19.5% takeover premium may seem low. However, one should add the 4.4% regression intercept, consider that the sample firms are poorly performing, and note that the *MDRET* measure is market-demeaned. In this study’s sample period, the mean annual market return is 9.2%.

6. Supplementary Analyses

6.1 Falsification Tests

Executives, directors, and financial and legal advisors, on both the sell side and buy side, are privy to private information about which firms are “in play” in the M&A market. They may leak their private knowledge to potential merger partners, potential clients, and the press (Frankel 2005), resulting in a plausibly exogenous and involuntary disclosure of a company’s strategic alternatives process. I collect involuntary disclosures (involuntary from the company’s perspective) of strategic alternatives that are leaked to and reported by news media, such as Bloomberg, Reuters, and *The Wall Street Journal*. Then I repeat the prior analyses using the voluntary announcing firms as the treatment group and the involuntary media leaks sample as the control group. These falsification tests find null and sometimes opposite results, which provide some confidence that the disclosure effects documented previously are not driven by self-selection endogeneity. The associated tables and their discussion are in the Online Appendix.

6.2 Leaked Disclosures

A related research question asks whether similar costs, benefits, and valuation effects follow from leaked media reports of companies’ evaluations of strategic alternatives. While the results to the prior falsification tests suggest yes, I also use the sample of leaked disclosures as an alternative treatment sample. To construct the counterfactual, the control sample consists of matched and entropy-balanced nonleaked and nondisclosing firms. These findings suggest that firms subject to a leaked disclosure experience qualitatively the same set of benefits, costs, and associated valuation consequences as firms that voluntarily disclose.²⁶

²⁶ These tables are available upon request. The treatment group in these tests consists of 246 involuntary media leak observations up to 2018. Hence statistical power is lower than in the main analyses. Future research might pursue a study focused on the effects of leaked announcements using a longer sample period and a larger sample.

6.7. Conclusion

This study provides evidence on the benefits, costs, and corresponding valuation effects of a company's voluntary disclosure of strategic alternatives. Since empirical evidence on this topic is limited to date, the findings advance our understanding of how this announcement affects investors, the information environment, the M&A sales process, future operating performance, and stock returns.

The coexistence of meaningful benefits and costs is important to document, as both are needed to avoid corner solutions of all or no firms voluntarily disclosing. The study's findings suggest that disclosure's benefits arise from improved transparency and greater attention from investors and bidders, leading to more information acquisition and a more robust and successful M&A sale process. The findings also suggest that the costs of disclosing appear to manifest as abnormally worse operating performance, because a public admission of business problems alienates the company's stakeholders and a public process leads to greater business disruption and consumes more resources. This paper's setting, the voluntary disclosure regarding the exploration of strategic alternatives, accentuates these cost-benefit trade-offs. Furthermore, this study estimates the costs' and benefits' countervailing effects on shareholder value. Essentially, a disclosing manager accepts the valuation penalty of disclosure to have an improved yet *uncertain* chance at seizing the offsetting M&A-related valuation premium of disclosure, the latter which is only captured by the acquired firms. On balance, the overall valuation effect is approximately -5%, supporting the threshold equilibrium and the disclosure's credibility.

The causal inferences of this study are subject to caveats. Like any voluntary disclosure setting, concerns about self-selection endogeneity loom. While the research design assumes that disclosure becomes the sole partitioning variable of interest after matching, entropy balancing, and including regression controls and fixed effects, potential omitted or unobservable characteristics

may drive results. Moreover, while it appears that antecedent operating performance trends are similar across the treatment and adjusted control groups, other uncontrolled-for determinants of firm performance may affect the future operating results.

The study has implications for company decision-makers. Managers assessing the expected benefits from disclosure should ask (i) whether the company already has broad appeal (e.g., operates in a hot industry or product segment or is a market leader) and (ii) whether there is an obvious and limited universe of potential merger partners (e.g., due to the niche nature of the company's business or regulatory constraints) (Frankle et al. 2019). If the answers are yes, then a public announcement to reach a previously-unknown buyer may have limited benefits. Managers choosing to disclose should also prepare for the risk of the public news harming stakeholder relationships, increasing business disruption, and consuming incremental resources. If managers do not voluntarily disclose their companies' evaluation of strategic alternatives, they should be ready to address any leaks and rumors during the sales process. The study also has implications for other market participants, such as investors and potential M&A buyers, so they may better anticipate the consequences after observing such disclosures.²⁷

Two puzzling findings emerge from this study. The first is that firms that announce but were not acquired would have been better off had they kept their evaluation of strategic alternatives private. Why do managers appear to make the wrong disclosure decision too often on average? The second is that, after the positive announcement return, the market appears surprised and disappointed by the eventual fates of the announcing firms on average. Does the market misprice these

²⁷ This study also has implications for understanding consequences of public disclosure in other economic settings where an asset is for sale. For example, the public sale process for a house can have costs (e.g., greater effort in response to increased showings and inquiries and declining relationships with neighbors) that are only offset by benefits if the asset is successfully sold (e.g., a competitive sales process).

announcements, or do risk or transaction costs explain the negative future returns? I leave these questions to future research.

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APPENDIX 1

Variable Definitions

Treatment: Announcement	
<i>ANNOUNCE_{i,t}</i>	An indicator variable that =1 if firm <i>i</i> announces strategic alternatives at date <i>t</i> and =0 for a control firm with pseudo-announcement date <i>t</i> .
Outcomes: Transactions	
<i>BIDIYR_{i,t}</i>	An indicator variable that =1 if firm <i>i</i> receives a bid within 365 days after the announcement or pseudo-announcement date. Bids are identified using SDC announcement dates. The form of the deal in SDC must be “Merger,” “Acquisition,” “Acq. of Assets,” or “Acq. Maj. Int.” with percentage sought > 89.9%.
<i>ACQIYR_{i,t}</i>	An indicator variable that =1 if firm <i>i</i> is acquired within 365 days after the announcement or pseudo-announcement date. Acquisitions are identified using Compustat deletion reasons 1 and 9, CRSP delisting code 2, and SDC effective dates. The form of the deal in SDC must be “Merger,” “Acquisition,” “Acq. of Assets,” or “Acq. Maj. Int.” with percentage sought > 89.9%.
<i>LIQIYR_{i,t}</i>	An indicator variable that =1 if firm <i>i</i> is liquidated (includes bankruptcies) within 365 days after the announcement or pseudo-announcement date. Liquidations are identified using Compustat deletion reasons 2 and 3 and CRSP delisting codes 4 and 5, if not in conflict with <i>ACQIYR</i> .
Outcomes: Returns	
<i>3DAYRET_{i,d}</i>	Three-day market-demeaned buy-and-hold returns for firm <i>i</i> around the announcement or pseudo-announcement date <i>d</i> . The three-day CRSP value-weighted return is subtracted.
<i>MDRET_{i,t}</i>	Market-demeaned buy-and-hold returns for firm <i>i</i> from day -10 to 252 (trading days) relative to the announcement or pseudo-announcement date. The buy-and-hold CRSP value-weighted return is subtracted. The measurement window ends with the delisting return, if applicable.
<i>ABRET_{i,t}</i>	Abnormal 12-month risk-adjusted returns for firm <i>i</i> beginning with the announcement or pseudo-announcement month. The measurement window ends with the delisting return, if applicable. $ABRET_{i,t} = \prod_{m=1}^{12} (1 + aret_{i,m}) - 1$ $aret_{i,m} = ret_{i,m} - r_m^f - \hat{\beta}(r_m^{mkt} - r_m^f)$ $\hat{\beta}$ is the estimated CAPM beta using up to 36 monthly observations of firm <i>i</i> from years <i>y</i> -2, <i>y</i> -1, and <i>y</i> , where I require at least 10 non-missing monthly returns. r_m^{mkt} is the monthly CRSP value-weighted return.
Outcomes: Benefits	
<i>ABDOWNLOAD_{i,d+10}</i>	Abnormal EDGAR downloads of firm <i>i</i> 's 10-K, 10-Q, and 8-K forms on day 10. Abnormal downloads on day <i>d</i> is calculated as the number of downloads on day <i>d</i> divided by the average number of downloads during the prior 365 days.
<i>NUMBID_{i,t}</i>	The number of publicly observed offers reported in SDC for target firm <i>i</i> during the subsequent 365 days. The form of the deal in SDC must be “Merger,” “Acquisition,” “Acq. of Assets,” or “Acq. Maj. Int.” with percentage sought > 89.9%.

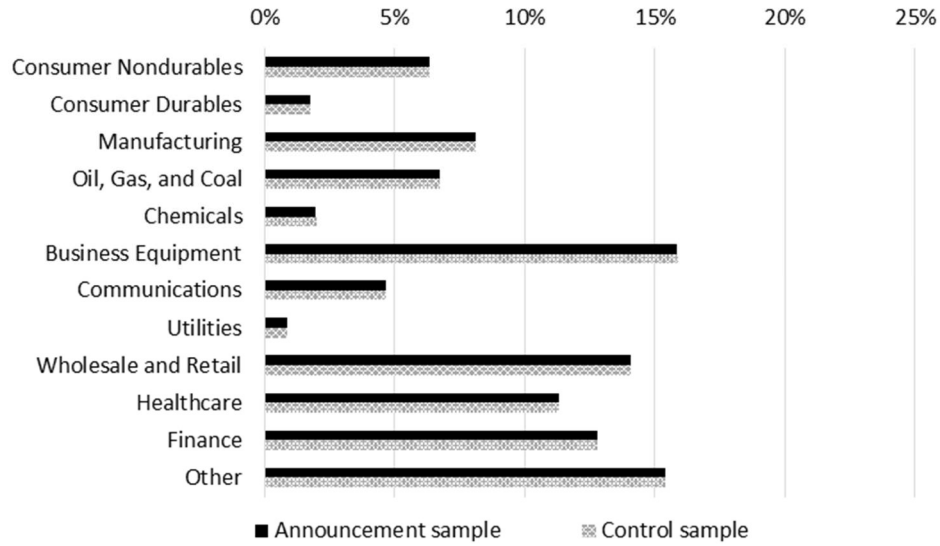
$DIFFINDBID_{i,t}$	The proportion of offers submitted by bidders from a different industry than firm i , using the Fama-French 48 industry classification.
$\ln(DEALVAL)_{i,t}$	The natural log of the deal value, in millions of dollars, reported in SDC.
$DAYSUNTILBID_{i,t}$	The number of trading days between firm i 's announcement or pseudo-announcement date and its first offer reported in SDC. This variable is bounded by 1 and 252.
Outcomes: Costs (operating performance)	
$ROA_{i,q+1}$	Future return-on-assets of firm i for the first full quarter after the announcement or pseudo-announcement date, calculated as niq divided by average total assets. piq is used if niq is missing.
$\Delta ROA_{i,q+1}$	Future seasonal change in quarterly return-on-assets of firm i , $ROA_{i,q+1} - ROA_{i,q-3}$.
$REV_{i,q+1}$	Future revenue of firm i scaled by average total assets, for the first full quarter after the announcement or pseudo-announcement date.
$\Delta REV_{i,q+1}$	Future seasonal change in quarterly sales revenue of firm i , $REV_{i,q+1} - REV_{i,q-3}$.
$OI_{i,q+1}$	Future operating income of firm i scaled by average total assets, for the first full quarter after the announcement or pseudo-announcement date, calculated as $oibdpq$ divided by average total assets.
$\Delta OI_{i,q+1}$	Future seasonal change in quarterly operating income of firm i , $OI_{i,q+1} - OI_{i,q-3}$.
$EMPGR_{i,y}$	Future annual employee growth of firm i , measured at the first fiscal year-end y after the announcement or pseudo-announcement date, $(emp_{i,y} - emp_{i,y-1}) / emp_{i,y-1}$.
Covariates: Fundamentals	
$\ln(ASSETS)_{i,q-1}$	Natural log of total assets of firm i at the end of the prior quarter.
$\ln(MVE)_{i,q-1}$	Natural log of the market value common equity of firm i at the end of the prior quarter, calculated as $\ln(prccq * cshoq)$.
$BTM_{i,q-1}$	Book-to-market ratio of common equity of firm i at the end of the prior quarter, calculated as $(prccq * cshoq) / ceqq$.
$LEV_{i,q-1}$	Leverage of firm i at the end of the prior quarter, calculated as ltq / atq .
$CASH_{i,q-1}$	Cash and equivalents che scaled by total assets of firm i at the end of the prior quarter. ch is used if che is missing.
$INTAN_{i,q-1}$	Intangible assets scaled by total assets of firm i at the end of the prior quarter. Missing values are replaced with 0.
$\Delta ROA_{i,q-1}$	Seasonal change in quarterly return-on-assets of firm i for the prior quarter, calculated as $ROA_{i,q-1} - ROA_{i,q-5}$. ROA is niq divided by average total assets. piq is used if niq is missing.
$REV_{i,q-1}$	Quarterly sales revenue scaled by average total assets of firm i for the prior quarter.
$OI_{i,q-1}$	Quarterly operating income of firm i for the prior quarter, calculated as $oibdpq$ divided by average total assets.
$ACC_{i,q-1}$	Quarterly operating accruals of firm i for the prior quarter, calculated as $(\Delta at - \Delta che) - (\Delta lt - \Delta lct - \Delta dltt)$ divided by average total assets.
$CFO_{i,q-1}$	Quarterly cash flows from operations scaled by average total assets of firm i for the prior quarter.
$WD_{i,q-1}$	An indicator variable that =1 if firm i had an income-decreasing write-down $wdpq$ during the prior quarter and =0 otherwise.
$RESTR_{i,q-1}$	An indicator variable that =1 if firm i had an income-decreasing restructuring charge $rcpq$ during the prior quarter and =0 otherwise.

$EMPGR_{i,y-1}$	Annual employee growth of firm i during the prior fiscal year, calculated as $(emp_{i,y-1} - emp_{i,y-2}) / emp_{i,y-2}$.
$DIVIDEND_{i,q-1}$	Quarterly dividend-to-price ratio of firm i at the end of the prior quarter.
Covariates: Returns and risk	
$MDRET_{i,t-1}$	Prior 12-month market-demeaned buy-and-hold returns for firm i ending the month before the announcement or pseudo-announcement month. The CRSP value-weighted return is subtracted.
$BETA_{i,y-1}$	Estimated CAPM beta of firm i using 36 monthly observations from years $y-2$, $y-1$, and y , where I require at least 10 observations. $(ret_{i,m} - r_m^f) = \alpha_{i,m} + \hat{\beta}(r_m^{mkt} - r_m^f) + \varepsilon_{i,m}$. r_m^{mkt} is the CRSP value-weighted monthly return including dividends.
Covariates: Analyst expectations and the information environment	
$EXPGROWTH_{i,m-1}$	Analysts' EPS growth expectation for firm i reported during the prior month, calculated as $(mean\ EPS\ estimate_{i,m-1} - prior\ year\ actual\ EPS) / prior\ year\ actual\ EPS$.
$NUMANALYST_{i,m-1}$	Number of analysts following firm i during the prior month.
Covariates: Governance and monitoring	
$BLOCKHOLDER_{i,m-1}$	Institutional blockholder ownership as a percent of shares outstanding in firm i at the end of the previous month. Source: Thomson Reuters Institutional Holdings.
$ACTIVIST_{i,m-1}$	Activist ownership as a percent of shares outstanding in firm i at the end of the previous month. Source: Audit Analytics Shareholder Activism.
$INSIDER_{i,m-1}$	Insider shares held as a percent of shares outstanding in firm i at the end of the previous month. Source: Thomson Reuters Insiders Filing Data, excluding problematic records.
Covariates: Manager traits	
$MANAGERFE_{i,m-1}$	Management forecast error using the most recent forecast for firm i as of the prior month-end, calculated as $(EPS\ forecast_{i,m-1} - actual) / actual$. Source: I/B/E/S Guidance.
$TURN_{i,m-1}$	Leadership turnover in firm i during the twelve-month period ending with previous month. I consider CEO, CFO, and Chairman turnover. This variable equals 0, 1, 2 or 3. Source: Audit Analytics Director and Officer Changes.
$OOTMOPTS_{i,m-1}$	An indicator variable that =1 if the CEO or CFO owns out-of-the-money stock options in firm i as of the prior fiscal year end where the strike price is compared to the stock price at the previous month-end. Source: ExecuComp Outstanding Equity Awards.
Covariate: Propensity score	
$PSCORE_{i,t}$	The propensity score is the conditional probability of treatment ($ANNOUNCE = 1$) given the firm's covariates, estimated under maximum likelihood using a multivariate logit model (Rosenbaum and Rubin 1985). The covariates used are $\ln(MVE)$, BTM , CHE , $INTAN$, ΔROA , ACC , CFO , WD , $RESTR$, $DIVIDEND$, $MDRET$, and $BETA$. All covariates are statistically significant at conventional levels in the logit model.

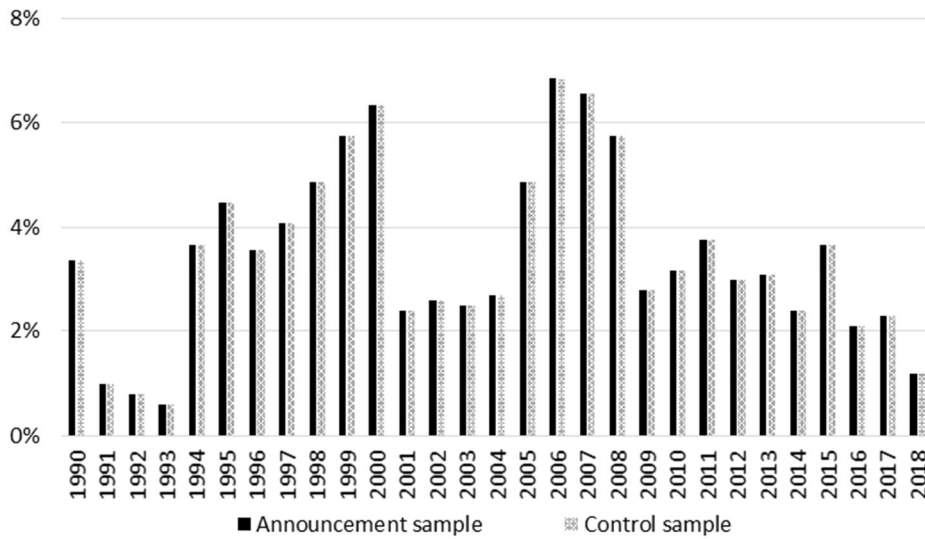
FIGURE 1

Industry and Year Distributions

Panel A: By industry



Panel B: By year



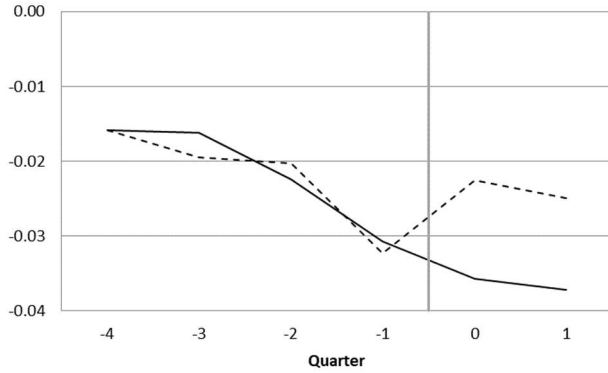
Notes: Panel A depicts the distribution of the announcement sample (*ANNOUNCE*=1) and adjusted control sample (*ANNOUNCE*=0) across the Fama-French 12 industries. Panel B depicts the sample distribution across years. The announcement sample contains 1,008 observations and the control sample contains 4,032 observations from 1990 to 2018.

FIGURE 2

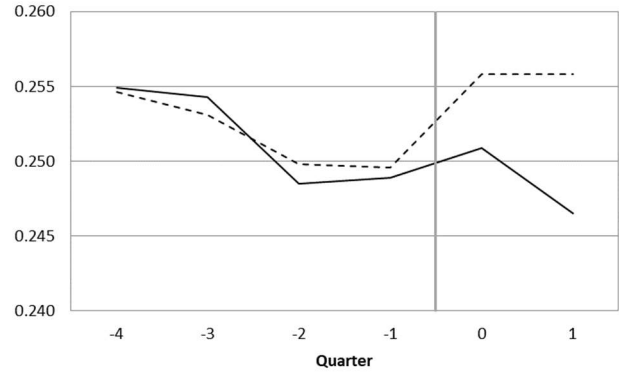
Operating Performance Discontinuity

— Announcement sample - - - - - Control sample

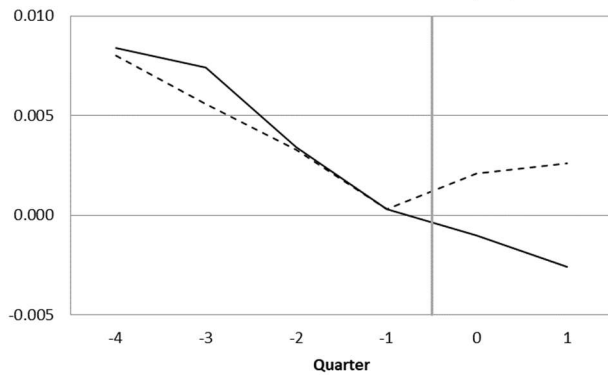
Panel A: Quarterly return on assets (*ROA*)



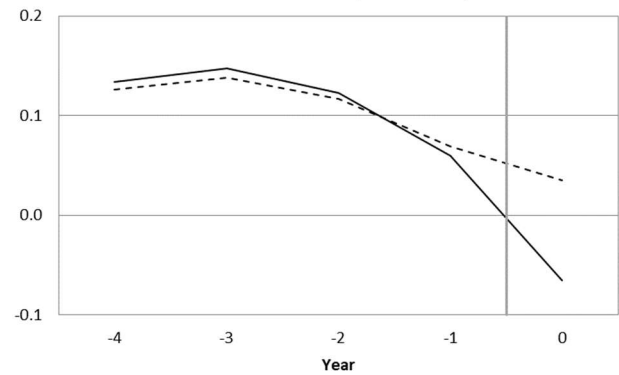
Panel B: Quarterly revenue (*REV*)



Panel C: Quarterly operating income (*OI*)



Panel D: Employee growth (*EMPGR*)



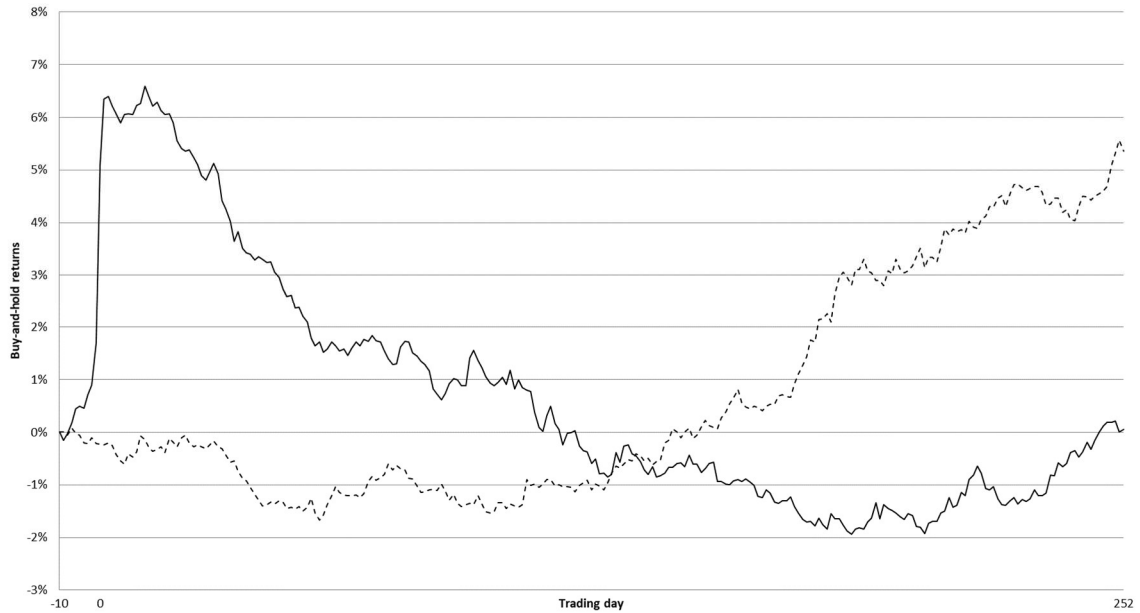
Notes: This figure depicts the mean values of operating performance measures of the announcement sample (*ANNOUNCE*=1) and adjusted control sample (*ANNOUNCE*=0). In panel A, quarterly return on assets is net income scaled by average total assets. In panel B, quarterly revenue is scaled by average total assets. In panel C, quarterly operating income is measured before depreciation expense and is scaled by average total assets. In panel D, employee growth is the annual growth in the number of employees. The announcement occurs during quarter 0 (panels A-C) and year 0 (panel D).

FIGURE 3

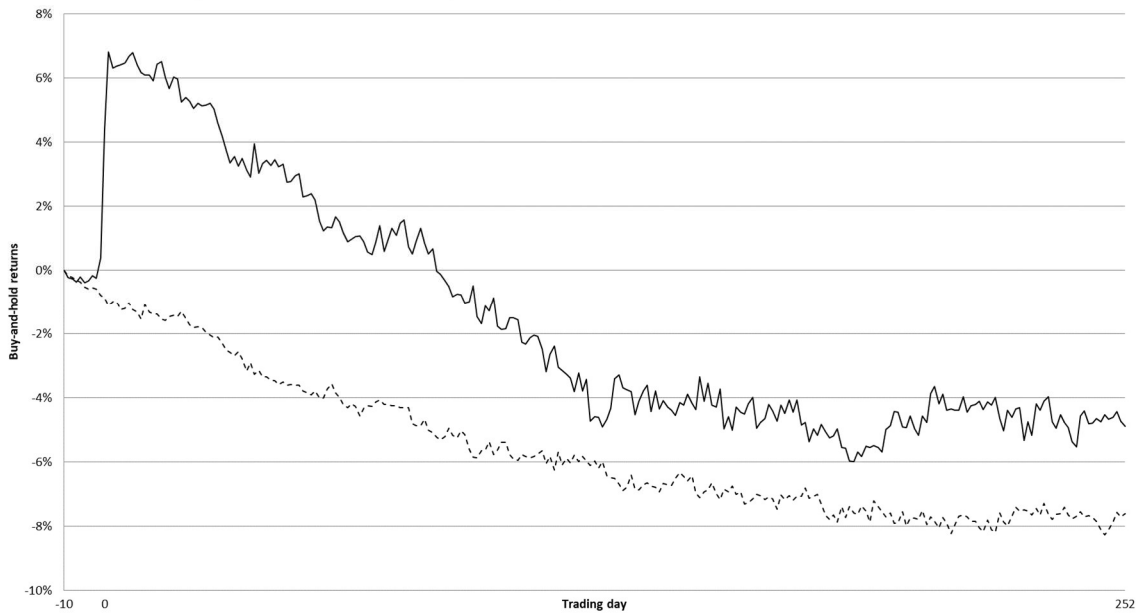
Long-Run Stock Returns

— Announcement sample - - - - Control sample

Panel A: Mean buy-and-hold returns (*MDRET*)



Panel B: Median buy-and-hold returns (*MDRET*)



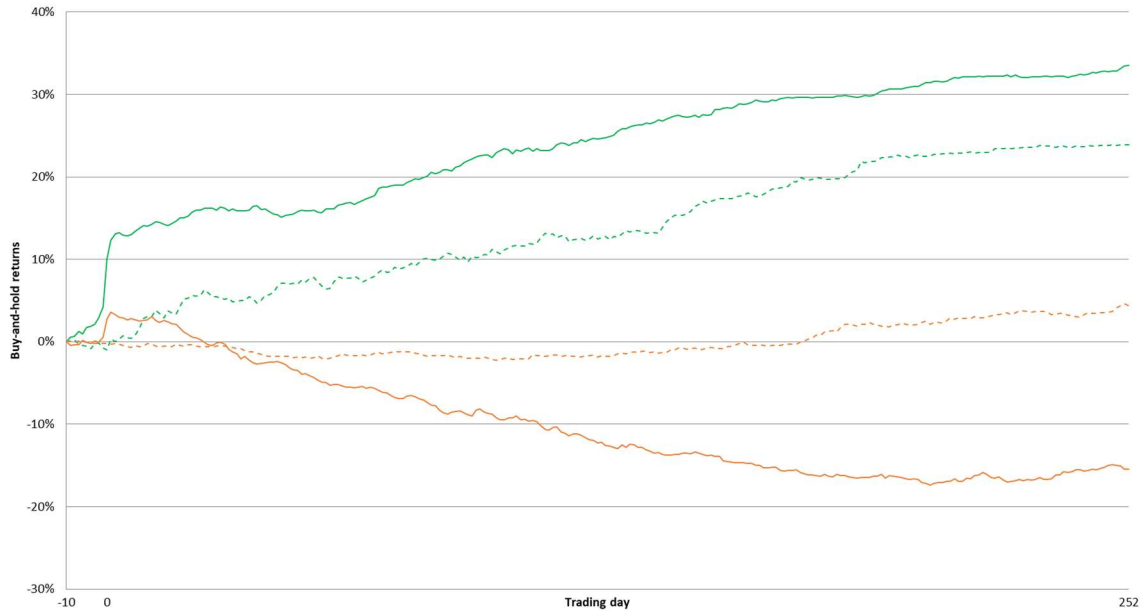
Notes: This figure graphs the buy-and-hold returns from day -10 to 252 (trading days) relative to the announcement or pseudo-announcement date. I subtract the CRSP value-weighted return over the same period for each observation. Panel A (B) presents the mean (median) returns of the announcement sample (*ANNOUNCE*=1) and adjusted control sample (*ANNOUNCE*=0).

FIGURE 4

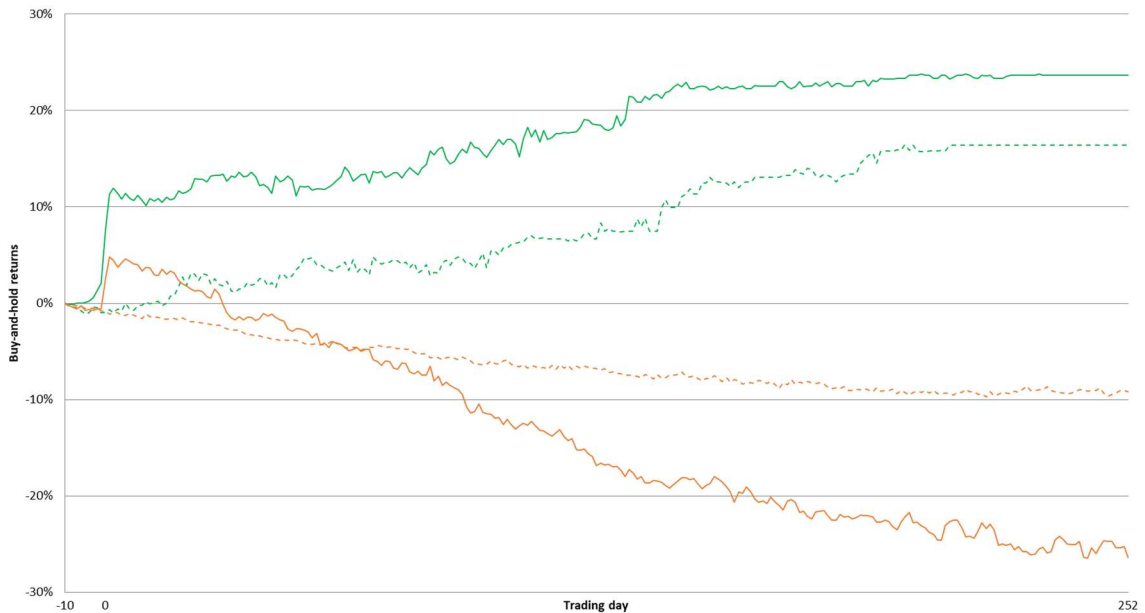
Long-Run Stock Returns for Acquired and Not Acquired Subsamples

— Announcement sample, acquired - - - Control sample, acquired — Announcement sample, not acquired - - - Control sample, not acquired

Panel A: Mean buy-and-hold returns (*MDRET*)



Panel B: Median buy-and-hold returns (*MDRET*)



Notes: This figure graphs the buy-and-hold returns from day -10 to 252 (trading days) relative to the announcement or pseudo-announcement date. I subtract the CRSP value-weighted return over the same period for each observation. Panel A (B) presents the mean (median) returns of the announcement sample (*ANNOUNCE*=1) and adjusted control sample (*ANNOUNCE*=0), separating firms that were and were not subsequently acquired.

TABLE 1
Content Analysis

	Hand-collected sample (N = 1,239)	After data merging (N = 1,008)
	Mean	Mean
Reasons		
<i>enhance shareholder value</i>	0.633	0.651
<i>includes quote</i>	0.395	0.413
<i>existing interest</i>	0.153	0.150
<i>existing offer, reject offer</i>	0.048	0.046
<i>executive or director turnover</i>	0.069	0.073
<i>activist pressure</i>	0.067	0.068
Process details		
<i>financial or legal advisor</i>	0.821	0.829
<i>special committee</i>	0.167	0.166
Alternatives under consideration		
<i>strategic</i>	0.781	0.803
<i>financial</i>	0.178	0.180
<i>sale of company</i>	0.646	0.641
<i>merger, combination</i>	0.329	0.330
<i>sale of part of company</i>	0.178	0.173
<i>full, broad, wide, range</i>	0.074	0.085
Firm performance		
<i>earnings news, guidance</i>	0.160	0.165
<i>curtailment</i>	0.022	0.019
<i>dividend news</i>	0.008	0.009

Notes: This table describes the content of strategic alternatives announcements using indicator variables that equal 1 if the content is present. The first category encompasses reasons for seeking strategic alternatives: to enhance shareholder value; a reason quoted from an executive or other company spokesperson; because the company received a preliminary indication of interest; because the company received and/or rejected an unsolicited offer; when there is executive or director turnover; and in response to an activist pushing for strategic alternatives. The second category encompasses the strategic alternatives process details, indicating if the company has: retained a financial or legal advisor; and formed an independent special committee to oversee the process. The third category encompasses the types of alternatives the company will evaluate: strategic alternatives; financial alternatives; a sale of the company; a merger or business combination; the sale of a unit, division, or part of the company; and a full, broad, or wide range of alternatives. The fourth category encompasses other aspects of firm performance reported in the announcement: earnings news and/or guidance; curtailments, including layoffs or location closures; and dividend news. The hand-collected sample includes 1,239 announcements by publicly traded companies from 1990 to 2018.

TABLE 2
Covariate Distributions

	Announcement sample			Control sample			Differences <i>p</i> -value
	N	Mean	SD	N	Mean	SD	
$\ln(ASSETS)_{i,q-1}$	1,008	5.450	1.871	4,032	5.450	1.886	0.993
$\ln(MVE)_{l,q-1}$	1,008	4.934	1.790	4,032	4.933	1.822	0.999
$BTM_{i,q-1}$	1,008	0.778	0.857	4,032	0.778	0.889	0.996
$LEV_{i,q-1}$	1,008	0.569	0.282	4,032	0.569	0.301	0.995
$CASH_{i,q-1}$	1,008	0.158	0.206	4,032	0.158	0.205	0.992
$INTAN_{i,q-1}$	1,008	0.093	0.173	4,032	0.093	0.170	0.998
$\Delta ROA_{i,q-1}$	1,008	-0.019	0.080	4,032	-0.019	0.079	0.995
$REV_{i,q-1}$	991	0.249	0.215	3,945	0.250	0.206	0.931
$OI_{i,q-1}$	1,005	0.000	0.068	4,006	0.000	0.069	0.976
$ACC_{i,q-1}$	1,008	-0.012	0.110	4,032	-0.011	0.110	0.995
$CFO_{i,q-1}$	1,008	-0.002	0.072	4,032	-0.002	0.068	0.999
$WD_{i,q-1}$	1,008	0.057	0.231	4,032	0.057	0.231	0.998
$RESTR_{i,q-1}$	1,008	0.141	0.348	4,032	0.141	0.348	0.996
$EMPGR_{i,y-1}$	773	0.060	0.374	3,779	0.069	0.356	0.531
$DIVIDEND_{i,q-1}$	1,008	0.155	0.664	4,032	0.155	0.666	0.997
$MDRET_{i,t-1}$	1,008	-0.211	0.578	4,032	-0.210	0.452	0.962
$BETA_{i,y-1}$	1,008	1.146	0.995	4,032	1.146	1.003	0.995
$EXPGROWTH_{i,m-1}$	498	-0.039	1.845	2,201	-0.045	1.611	0.948
$NUMANALYST_{i,m-1}$	508	5.663	5.497	2,239	5.570	5.329	0.735
$BLOCKHOLDER_{i,m-1}$	1,008	0.178	0.165	4,032	0.178	0.176	0.993
$ACTIVIST_{i,m-1}$	1,008	0.065	0.143	4,032	0.065	0.163	0.997
$INSIDER_{i,m-1}$	1,008	0.188	0.327	4,032	0.188	0.337	1.000
$MANAGERFE_{i,m-1}$	221	-0.147	1.258	848	-0.080	1.263	0.503
$ MANAGERFE _{i,m-1}$	221	0.719	1.455	848	0.705	1.637	0.907
$TURN_{i,m-1}$	1,008	0.241	0.588	4,032	0.241	0.590	0.998
$OOTMOPTS_{i,m-1}$	134	0.724	0.449	507	0.683	0.466	0.365
$PSCORE_{i,t}$	1,008	-3.870	0.549	4,032	-3.871	0.512	0.977

Notes: This table presents the empirical distributions of covariates for the announcement sample ($ANNOUNCE=1$) and adjusted control sample ($ANNOUNCE=0$) and *p*-values from *t* tests of differences in means. See Appendix 1 for variable definitions.

TABLE 3
Announcement Reaction and Future M&A Outcomes

Panel A: Market outcomes

	Pred.	Dependent variable =					
		<i>3DAYRET_{i,d}</i>		<i>BIDIYR_{i,t}</i>		<i>ACQIYR_{i,t}</i>	
		(1)	(2)	(3)	(4)	(5)	(6)
<i>Intercept</i>		N/A due to FE	-0.004 (-0.13)	N/A due to FE	-0.322 (-1.12)	N/A due to FE	-0.492** (-2.47)
<i>ANNOUNCE_{i,t}</i>	+	0.054*** (5.43)		1.302*** (14.88)		1.216*** (19.02)	
<i>marginal effect</i>		.		0.324		0.264	
<i>enhance shareholder value</i>			0.025*		0.062		0.068
<i>includes quote</i>			-0.013		-0.047		-0.121
<i>existing interest</i>			0.084***		0.251***		0.265*
<i>existing offer, reject offer</i>			-0.013		-0.122		0.674***
<i>executive or director turnover</i>			-0.051**		0.174		0.025
<i>activist pressure</i>			0.009		-0.021		-0.055
<i>financial or legal advisor</i>			0.044***		0.054		-0.090
<i>special committee</i>			-0.013		0.062		-0.098
<i>strategic</i>			0.000		-0.114		0.045
<i>financial</i>			-0.024*		-0.116		-0.196*
<i>sale of company</i>			0.034***		0.026		0.133**
<i>merger, combination</i>			0.002		-0.089		-0.073
<i>sale of part of company</i>			-0.016		-0.182		-0.301*
<i>full, broad, wide, range</i>			-0.001		0.016		0.017
<i>earnings news, guidance</i>			-0.088***		0.273**		0.079
<i>curtailment</i>			-0.152***		0.630		0.222
<i>dividend news</i>			-0.106		-0.331		-0.657
N		5,040	1,008	5,040	1,008	5,040	1,008
Regression method		OLS	OLS	Probit	Probit	Probit	Probit
Control variables		Yes	Yes	Yes	Yes	Yes	Yes
Industry and year FE		Yes	No	Yes	No	Yes	No
Industry and year clustered SE		Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ² or Pseudo R ²		0.091	0.173	0.198	0.065	0.185	0.077

TABLE 3 (continued)

Panel B: Frequency of M&A outcomes

	<i>ANNOUNCE</i> =0	<i>ANNOUNCE</i> =1	Total
<i>BIDIYR</i> =0	3,771 (93.3%)	596 (59.1%)	4,367
<i>BIDIYR</i> =1	261 (6.7%)	412 (40.9%)	673
Total	4,032	1,008	5,040
<hr/>			
<i>ACQIYR</i> =0	3,828 (95.0%)	689 (68.4%)	4,517
<i>ACQIYR</i> =1	204 (5.0%)	319 (31.6%)	523
Total	4,032	1,008	5,040

Notes: Panel A presents regressions of three-day stock returns, an M&A offer indicator variable, or a completed acquisition indicator variable on the announcement indicator variable *ANNOUNCE* (odd numbered columns) or the disclosure contents (even numbered columns). *3DAYRET* is the three-day market reaction, subtracting the CRSP value-weighted return. *BIDIYR* is an indicator variable that =1 if firm *i* received a subsequent M&A offer. *ACQIYR* is an indicator variable that =1 if firm *i* was subsequently acquired. Control variables are antecedent $\ln(MKVAL)$, *BTM*, *LEV*, *CASH*, *INTAN*, ΔROA , *ACC*, *CFO*, *WD*, *RESTR*, *DIVIDEND*, *MDRET*, and *BETA*. *T* statistics for OLS and *z* statistics for probit regressions are in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. Panel B describes the frequency of the announcement and control firms subsequently receiving a bid (*BIDIYR*) and being acquired (*ACQIYR*). The frequency counts (percentages) presented for the control group are raw counts (counterfactual percentages). See Appendix 1 for variable definitions. See the notes to Table 1 for the disclosure content descriptions.

TABLE 4
Benefits of Disclosure

	Pred.	Dependent variable =										
		$ABDOWNLOAD_{i,d+10}$		$NUMBID_{i,t}$		$DIFFINDBID_{i,t}$		$\ln(DEALVAL)_{i,t}$		$DAYSUNTILBID_{i,t}$		
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Pred.	(9)	(10)
<i>Intercept</i>		-1.255*** (-8.13)	N/A due to FE	-4.296*** (-22.37)	N/A due to FE	-3.808*** (-26.63)	N/A due to FE	18.867*** (95.30)	N/A due to FE		4.865*** (130.85)	N/A due to FE
$ANNOUNCE_{i,t}$	+	1.993*** (10.11)	1.965*** (10.01)	0.185*** (3.52)	0.192*** (3.51)	1.225*** (7.01)	1.274*** (8.27)	0.544** (2.55)	0.096 (1.40)	-	-0.280*** (-5.80)	-0.287*** (-5.72)
<i>marginal effect</i>			.	0.052	0.054	0.174	0.181	.	.		-28.696	-29.474
$ABDOWNLOAD_{i,d-10}$		0.339*** (8.59)	0.345*** (8.59)									
$BIDIYR_{i,t}$				4.254*** (18.69)	4.245*** (18.65)							
$NUMBID_{i,t}$						1.542*** (15.41)	1.641*** (19.17)					
N		2,188	2,188	5,040	5,040	5,040	5,040	623	623		673	673
Regression method		Tobit	Tobit	Poisson	Poisson	Poisson	Poisson	Tobit	Tobit		Poisson	Poisson
Control variables		No	Yes	No	Yes	No	Yes	No	Yes		No	Yes
Industry and year FE		No	Yes	No	Yes	No	Yes	No	Yes		No	Yes
Pseudo R ²		0.020	0.031	0.601	0.603	0.387	0.420	0.002	0.547		0.038	0.107

Notes: This table presents the regressions of hypothesized disclosure benefits on the announcement indicator variable $ANNOUNCE$. $ABDOWNLOAD$ is the abnormal downloads of firm i 's 10-K, 10-Q, and 8-K filings. $NUMBID$ is the number of public offers that firm i subsequently received. $DIFFINDBID$ is the proportion of offers received from bidders from different industries than firm i . $\ln(DEALVAL)$ is the natural log of the average offer value received by firm i . $DAYSUNTILBID$ is the number of trading days until the first public offer is received by firm i . Control variables are antecedent $\ln(MKVAL)$, BTM , LEV , $CASH$, $INTAN$, ΔROA , ACC , CFO , WD , $RESTR$, $DIVIDEND$, $MDRET$, and $BETA$. T -statistics for tobit regressions or z -statistics for poisson regressions are in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. The results using poisson regressions are robust to using negative binomial and tobit regressions instead. The pseudo R² from poisson regressions are unweighted. See Appendix 1 for variable definitions.

TABLE 5

Indirect Costs of Disclosure

	Pred.	Dependent variable =						
		$ROA_{i,q+1}$ (1)	$\Delta ROA_{i,q+1}$ (2)	$REV_{i,q+1}$ (3)	$\Delta REV_{i,q+1}$ (4)	$OI_{i,q+1}$ (5)	$\Delta OI_{i,q+1}$ (6)	$EMPGR_{i,y}$ (7)
$ANNOUNCE_{i,t}$	-	-0.010*** (-5.17)	-0.012*** (-5.62)	-0.008* (-1.91)	-0.009*** (-2.70)	-0.006* (-1.96)	-0.007*** (-4.78)	-0.104*** (-6.72)
variable $_{i,q-1}$ or $_{i,y-1}$		0.136*** (3.08)	-0.038 (-0.68)	0.421*** (5.62)	0.334*** (5.57)	0.272*** (3.62)	0.154** (2.19)	-0.001** (-2.14)
variable $_{i,q-2}$		0.123*** (9.23)	-0.050 (-1.41)	0.008 (0.35)	-0.104*** (-2.79)	0.132 (1.61)	-0.049 (-0.63)	
variable $_{i,q-3}$		0.227*** (3.72)		0.648*** (9.80)		0.352*** (3.23)		
variable $_{i,q-4}$		0.199*** (5.95)	-0.051 (-1.29)	-0.129*** (-6.58)	-0.264*** (-6.79)	0.063*** (3.53)	-0.169*** (-3.21)	
N		4,772	4,772	4,693	4,693	4,667	4,667	4,571
Control variables		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind. and year FE		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind. and year clustered SE		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²		0.453	0.069	0.894	0.159	0.664	0.101	0.134

Notes: This table presents the OLS regressions of future operating measures on the announcement indicator variable $ANNOUNCE$. $ROA_{i,q+1}$ is the future return-on-assets ratio, and $\Delta ROA_{i,q+1}$ is the seasonal change. $REV_{i,q+1}$ is the future revenue scaled by average total assets, and $\Delta REV_{i,q+1}$ is the seasonal change. $OI_{i,q+1}$ is the future operating income scaled by average total assets, and $\Delta OI_{i,q+1}$ is the seasonal change. $EMPGR_{i,y}$ is the annual employee growth. *Variable* denotes lagged values of return-on-assets, revenue, operating income, or number of employees for the respective columns. Control variables are antecedent $\ln(MKVAL)$, BTM , LEV , $CASH$, $INTAN$, ΔROA , ACC , CFO , WD , $RESTR$, $DIVIDEND$, $MDRET$, and $BETA$. No intercept is presented due to the inclusion of fixed effects. *T*-statistics are in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. See Appendix 1 for variable definitions.

TABLE 6

Valuation Effects of Disclosure

Panel A: Valuation costs and benefits

	Pred	Dependent variable =							
		<i>MDRET_{i,t}</i>				<i>ABRET_{i,t}</i>			
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Intercept</i>	.	0.054*** (2.91)	0.044** (2.36)	N/A due to FE	N/A due to FE	0.021 (1.47)	0.011 (0.78)	N/A due to FE	N/A due to FE
<i>ANNOUNCE_{i,t}</i>	-	-0.053** (-2.03)	-0.198*** (-6.89)	-0.202*** (-4.08)	-0.157*** (-3.04)	-0.045** (-2.17)	-0.180*** (-7.97)	-0.179*** (-5.36)	-0.152*** (-4.06)
<i>ACQIYR_{i,t}</i>	+		0.195** (2.34)	0.166** (2.47)	0.143* (1.89)		0.201*** (3.08)	0.169*** (3.25)	0.148** (2.55)
<i>ANNOUNCE_{i,t} * ACQIYR_{i,t}</i>	+		0.294*** (3.20)	0.331*** (3.15)	0.293*** (2.72)		0.257*** (3.56)	0.281*** (3.77)	0.259*** (3.36)
<i>LIQIYR_{i,t}</i>	-				-0.665*** (-9.34)				-0.592*** (-10.99)
<i>ANNOUNCE_{i,t} * LIQIYR_{i,t}</i>	.				-0.007 (-0.11)				0.099 (1.04)
N		5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040
Control variables		No	No	Yes	Yes	No	No	Yes	Yes
Ind. and year FE		No	No	Yes	Yes	No	No	Yes	Yes
Ind. and year clustered SE		No	No	Yes	Yes	No	No	Yes	Yes
Adj. R ²		0.001	0.032	0.091	0.118	0.001	0.045	0.092	0.120

TABLE 6 (continued)

Panel B: Valuation effects for acquired and non-acquired subsamples

	<i>Acquired firms only (ACQIYR=1)</i>					<i>Non-acquired firms only (ACQIYR=0)</i>				
	Pred.	Dependent variable =				Pred.	Dependent variable =			
		<i>MDRET</i> _{<i>i,t</i>}	<i>ABRET</i> _{<i>i,t</i>}	<i>MDRET</i> _{<i>i,t</i>}	<i>ABRET</i> _{<i>i,t</i>}		<i>MDRET</i> _{<i>i,t</i>}	<i>ABRET</i> _{<i>i,t</i>}		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
<i>Intercept</i>	+	0.239*** (2.89)	N/A due to FE	0.213*** (3.06)	N/A due to FE	0	0.044** (2.37)	N/A due to FE	0.011 (0.79)	N/A due to FE
<i>ANNOUNCE</i> _{<i>i,t</i>}	+	0.096 (1.08)	0.157 (1.59)	0.077 (1.03)	0.122 (1.62)	-	-0.198*** (-6.90)	-0.202*** (-4.02)	-0.180*** (-8.05)	-0.178*** (-5.31)
N		523	523	523	523	4,517	4,517	4,517	4,517	
Control variables		No	Yes	No	Yes	No	Yes	No	Yes	
Ind. and year FE		No	Yes	No	Yes	No	Yes	No	Yes	
Ind. and year clustered SE		No	Yes	No	Yes	No	Yes	No	Yes	
Adj. R ²		0.000	0.132	0.000	0.137	0.010	0.076	0.014	0.068	

Notes: Panel A presents the regressions of long-run returns on the announcement indicator variable *ANNOUNCE*, transaction outcomes *ACQIYR* and *LIQIYR*, and interaction terms. *MDRET* is the market-demeaned buy-and-hold returns from day -10 to 252 (trading days). *ABRET* is the abnormal risk-adjusted buy-and-hold returns from the beginning of month 0 through the end of month 11. Panel B presents regressions of long-run returns on the announcement indicator variable *ANNOUNCE*. Control variables are antecedent *ln(MKVAL)*, *BTM*, *LEV*, *CASH*, *INTAN*, *ΔROA*, *ACC*, *CFO*, *WD*, *RESTR*, *DIVIDEND*, *MDRET*, and *BETA*. *T*-statistics are in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. See Appendix 1 for variable definitions.

ONLINE APPENDIX

Falsification Tests

In Tables A1 through A4 that follow, I repeat the analyses from Tables 3 through 6 in the manuscript using an alternative research design and find null results, as expected. The treatment group remains the same as before: firms that voluntarily announce their evaluation of strategic alternatives. However, I now use a sample of involuntary strategic alternatives announcements as the control group. The idea behind these falsification tests is that if my main results are driven by self-selection endogeneity, I would find the same significant results when comparing firms that self-selected to disclose to firms that experienced involuntary disclosure. On the other hand, if my main results indeed capture the effects of disclosure, then I should find no differences in outcomes across these two groups, because both groups experience similar effects of disclosure.

I hand collect media leaks made during 1990-2018 about companies that are seeking strategic alternatives, which are leaked to the press by anonymous “sources familiar with the matter.” After requiring non-missing variables and eliminating firms that experienced a media leak and immediately followed up with a corporate announcement, I have 998 observations in the treatment group (*ANNOUNCE*=1) and 236 observations in the control group (*ANNOUNCE*=0). Due to the limited number of observations in the control group, matching and entropy-balancing are not feasible.

Table A1 presents the falsification tests of the announcement’s market reaction and future bid and acquisition outcomes, in the spirit of Table 3 in the manuscript. These results indicate that voluntary announcements lead to lower market reactions than do media leaks and that the effects of voluntary and involuntary disclosures on the probability of a future M&A offer and transaction are statistically indistinguishable.

Table A2 presents the falsification tests of disclosure's benefits, where the dependent variables are abnormal EDGAR downloads, number of bidders, industry diversity of bidders, deal value, and timeliness of receiving an offer. The results in Table A2 are not significant for the first three benefits and suggest the opposite effect for the last two benefits compared to Table 4 in the manuscript. Voluntary announcements of strategic alternatives, compared to the involuntary media leaks, are associated with lower deal values and longer wait times to receive an offer.

Table A3 presents the falsification tests of the disclosure's indirect costs using various measures of future operating performance. While the results in Table 5 in the manuscript suggest that disclosure negatively affected future operating performance, the results in Table A3 do not detect differential costs on operating performance from voluntary versus involuntary disclosures.

Table A4 presents the falsification tests of long-run returns. In panel A, the coefficient estimates on *ANNOUNCE* and the interaction term *ANNOUNCE*ACQIYR* are statistically insignificant. In panel B, the coefficient estimate on *ANNOUNCE* is statistically insignificant as well. These results suggest that firms that voluntarily and involuntarily reveal their strategic alternatives experience similar gross and net valuation effects from the benefits and costs of disclosure.

Overall, the falsification tests provide comfort that the benefits, costs, and valuation effects documented in the manuscript are not driven by self-selection and compare the effects of voluntarily and involuntarily announcements.

TABLE A1
Falsification Test: Announcement Reaction and Future M&A Outcomes

Panel A: Market outcomes

	Dependent variable =			
	Pred.	$3DAYRET_{i,d}$ (1)	$BIDIYR_{i,t}$ (2)	$ACQIYR_{i,t}$ (3)
$ANNOUNCE_{i,t}$	0	-0.028** (-2.42)	0.074 (0.58)	0.117 (1.06)
<i>marginal effect</i>		.	0.026	0.039
N		1,234	1,234	1,234
Regression method		OLS	Probit	Probit
Control variables		Yes	Yes	Yes
Industry and year FE		Yes	Yes	Yes
Industry and year clustered SE		Yes	Yes	Yes
Adj. R ² or Pseudo R ²		0.111	0.079	0.067

Panel B: Frequency of M&A outcomes in falsification test sample

	$LEAK=1$	$ANNOUNCE=1$	Total
$BIDIYR=0$	131 (55.5%)	592 (59.3%)	723
$BIDIYR=1$	105 (44.5%)	406 (40.7%)	511
Total	236	998	1,234
$ACQIYR=0$	154 (65.3%)	685 (68.6%)	839
$ACQIYR=1$	82 (34.7%)	313 (31.4%)	395
Total	236	998	1,234

Notes: Panel A presents regressions of three-day stock returns, an M&A offer indicator variable, or a completed acquisition indicator variable on the voluntary announcement indicator variable $ANNOUNCE$. $3DAYRET$ is the three-day market reaction, subtracting the CRSP value-weighted return. $BIDIYR$ is an indicator variable that =1 if firm i received a subsequent M&A offer. $ACQIYR$ is an indicator variable that =1 if firm i was subsequently acquired. Control variables are antecedent $\ln(MKVAL)$, BTM , LEV , $CASH$, $INTAN$, ΔROA , ACC , CFO , WD , $RESTR$, $DIVIDEND$, $MDRET$, and $BETA$. No intercept is presented due to the inclusion of fixed effects. T statistics for OLS and z statistics for probit regressions are in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. Panel B describes the frequency of the voluntary announcement and media leak firms subsequently receiving a bid ($BIDIYR$) and being acquired ($ACQIYR$). See Appendix 1 in the manuscript for variable definitions.

TABLE A2

Falsification Test: Benefits of Disclosure

	Pred.	Dependent variable =									
		$ABDOWNLOAD_{i,d+10}$		$NUMBID_{i,t}$		$DIFFINDBID_{i,t}$		$\ln(DEALVAL)_{i,t}$		$DAYSUNTILBID_{i,t}$	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Intercept</i>		0.922** (2.37)	N/A due to FE	-3.476*** (-15.45)	N/A due to FE	-2.487*** (-16.47)	N/A due to FE	21.513*** (124.06)	N/A due to FE	4.266*** (368.88)	N/A due to FE
$ANNOUNCE_{i,t}$	0	-0.701 (-1.60)	-0.520 (-0.97)	0.034 (0.34)	-0.000 (-0.00)	-0.009 (-0.06)	0.057 (0.31)	-2.134*** (-10.94)	0.051 (0.66)	0.325*** (25.78)	0.160*** (9.85)
<i>marginal effect</i>		.	.	0.017	-0.000	-0.002	0.014	.	.	30.187	14.882
$ABDOWNLOAD_{i,d-10}$		0.420*** (5.35)	0.434*** (5.51)								
$BIDIYR_{i,t}$				3.567*** (16.77)	3.555*** (16.55)						
$NUMBID_{i,t}$						1.461*** (21.28)	1.638*** (17.75)				
N		579	579	1,234	1,234	1,234	1,234	477	477	511	511
Regression method		Tobit	Tobit	Poisson	Poisson	Poisson	Poisson	Tobit	Tobit	Poisson	Poisson
Control variables		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Industry and year FE		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Pseudo R ²		0.011	0.029	0.391	0.395	0.239	0.295	0.054	0.637	0.027	0.161

Notes: This table presents the regressions of hypothesized disclosure benefits on the voluntary announcement indicator variable *ANNOUNCE*. *ABDOWNLOAD* is the abnormal downloads of firm *i*'s 10-K, 10-Q, and 8-K filings. *NUMBID* is the number of public offers that firm *i* subsequently received. *DIFFINDBID* is the proportion of offers received from bidders from a different industry than firm *i*. *ln(DEALVAL)* is the natural log of the average offer value received by firm *i*. *DAYSUNTILBID* is the number of trading days until the first public offer is received by firm *i*. Control variables are antecedent *ln(MKVAL)*, *BTM*, *LEV*, *CASH*, *INTAN*, ΔROA , *ACC*, *CFO*, *WD*, *RESTR*, *DIVIDEND*, *MDRET*, and *BETA*. *T*-statistics for tobit regressions or *z*-statistics for poisson regressions are in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. See Appendix 1 in the manuscript for variable definitions.

TABLE A3

Falsification Test: Indirect Costs of Disclosure

	Pred.	Dependent variable =						
		$ROA_{i,q+1}$ (1)	$\Delta ROA_{i,q+1}$ (2)	$REV_{i,q+1}$ (3)	$\Delta REV_{i,q+1}$ (4)	$OI_{i,q+1}$ (5)	$\Delta OI_{i,q+1}$ (6)	$EMPGR_{i,y}$ (7)
$ANNOUNCE_{i,t}$	0	-0.005 (-0.91)	-0.009 (-1.58)	-0.001 (-0.51)	-0.007 (-1.37)	-0.001 (-0.24)	-0.002 (-0.85)	-0.042 (-1.14)
variable $_{i,q-1}$ or $_{i,y-1}$		0.228** (2.31)	0.046 (0.62)	0.312*** (3.70)	0.243*** (3.26)	0.373*** (3.18)	0.244** (2.26)	-0.001** (-2.35)
variable $_{i,q-2}$		0.173** (2.48)	0.023 (0.34)	0.284*** (3.13)	-0.015 (-0.20)	0.281*** (2.89)	-0.031 (-0.33)	
variable $_{i,q-3}$		0.234** (2.03)		0.393*** (2.60)		0.207* (1.70)		
variable $_{i,q-4}$		0.208 (1.56)	-0.048 (-0.35)	-0.057 (-1.33)	-0.257*** (-5.20)	0.076 (0.84)	-0.146 (-1.47)	
N		1,074	1,074	1,062	1,062	1,055	1,055	956
Control variables		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind. and year FE		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind. and year clustered SE		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²		0.436	0.050	0.887	0.131	0.657	0.110	0.148

Notes: This table presents the OLS regressions of future operating measures on the voluntary announcement indicator variable $ANNOUNCE$. $ROA_{i,q+1}$ is the future return-on-assets ratio, and $\Delta ROA_{i,q+1}$ is the seasonal change. $REV_{i,q+1}$ is the future revenue scaled by average total assets, and $\Delta REV_{i,q+1}$ is the seasonal change. $OI_{i,q+1}$ is the future operating income scaled by average total assets, and $\Delta OI_{i,q+1}$ is the seasonal change. $EMPGR_{i,y}$ is the annual employee growth. *Variable* denotes lagged values of return-on-assets, revenue, operating income, or number of employees for the respective columns. Control variables are antecedent $ln(MKVAL)$, BTM , LEV , $CASH$, $INTAN$, ΔROA , ACC , CFO , WD , $RESTR$, $DIVIDEND$, $MDRET$, and $BETA$. No intercept is presented due to the inclusion of fixed effects. *T*-statistics are in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. See Appendix 1 in the manuscript for variable definitions.

TABLE A4

Falsification Test: Valuation Effects of Disclosure

Panel A: Valuation costs and benefits

	Pred	Dependent variable =							
		<i>MDRET_{i,t}</i>				<i>ABRET_{i,t}</i>			
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Intercept</i>	.	0.066 (1.35)	-0.073 (-1.24)	N/A due to FE	N/A due to FE	0.013 (0.34)	-0.117** (-2.57)	N/A due to FE	N/A due to FE
<i>ANNOUNCE_{i,t}</i>	0	-0.067 (-1.22)	-0.082 (-1.26)	-0.054 (-0.84)	-0.047 (-0.76)	-0.038 (-0.87)	-0.051 (-1.02)	-0.074 (-1.52)	-0.070 (-1.36)
<i>ACQIYR_{i,t}</i>	+		0.400*** (4.03)	0.402*** (3.14)	0.392*** (2.96)		0.374*** (4.87)	0.359*** (3.67)	0.351*** (3.40)
<i>ANNOUNCE_{i,t} * ACQIYR_{i,t}</i>	0		0.090 (0.81)	0.097 (0.76)	0.050 (0.39)		0.084 (0.97)	0.089 (0.87)	0.056 (0.52)
<i>LIQIYR_{i,t}</i>	-				-0.971*** (-3.72)				-0.741*** (-7.86)
<i>ANNOUNCE_{i,t} * LIQIYR_{i,t}</i>	.				0.342** (1.98)				0.289** (2.14)
N		1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234
Control variables		No	No	Yes	Yes	No	No	Yes	Yes
Ind. and year FE		No	No	Yes	Yes	No	No	Yes	Yes
Ind. and year clustered SE		No	No	Yes	Yes	No	No	Yes	Yes
Adj. R ²		0.000	0.084	0.148	0.187	-0.000	0.117	0.170	0.202

TABLE A4 (continued)

Panel B: Valuation effects for acquired and non-acquired subsamples

	<i>Acquired firms only (ACQIYR=1)</i>					<i>Non-acquired firms only (ACQIYR=0)</i>				
	Pred.	Dependent variable =				Pred.	Dependent variable =			
		<i>MDRET_{i,t}</i>	<i>ABRET_{i,t}</i>	<i>MDRET_{i,t}</i>	<i>ABRET_{i,t}</i>		<i>MDRET_{i,t}</i>	<i>ABRET_{i,t}</i>		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
<i>Intercept</i>	+	0.327*** (4.30)	N/A due to FE	0.258*** (4.24)	N/A due to FE	-	-0.073 (-1.21)	N/A due to FE	-0.117** (-2.55)	N/A due to FE
<i>ANNOUNCE_{i,t}</i>	0	0.008 (0.10)	0.011 (0.19)	0.032 (0.47)	-0.034 (-1.09)	0	-0.082 (-1.23)	-0.027 (-0.35)	-0.051 (-1.01)	-0.047 (-0.94)
N		395	395	395	395		839	839	839	839
Control variables		No	Yes	No	Yes		No	Yes	No	Yes
Ind. and year FE		No	Yes	No	Yes		No	Yes	No	Yes
Ind. and year clustered SE		No	Yes	No	Yes		No	Yes	No	Yes
Adj. R ²		-0.003	0.144	-0.002	0.137		0.001	0.073	0.000	0.066

Notes: Panel A presents the regressions of long-run returns on the announcement indicator variable *ANNOUNCE*, transaction outcomes *ACQIYR* and *LIQIYR*, and interaction terms. *MDRET* is the market-demeaned buy-and-hold returns from day -10 to 252 (trading days). *ABRET* is the abnormal risk-adjusted buy-and-hold returns from the beginning of month 0 through the end of month 11. Panel B presents regressions of long-run returns on the announcement indicator variable *ANNOUNCE*. Control variables are antecedent *ln(MKVAL)*, *BTM*, *LEV*, *CASH*, *INTAN*, *ΔROA*, *ACC*, *CFO*, *WD*, *RESTR*, *DIVIDEND*, *MDRET*, and *BETA*. *T*-statistics are in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels, respectively, based on two-tailed tests. See Appendix 1 in the manuscript for variable definitions.