Fear, Feedback and Disclosure: Different Shades of Media's Governance Role in M&A Decisions

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ABSTRACT

We examine the governance role of media coverage on the M&A decision-making process using a large sample of M&A events, and relate those events to news items appeared in leading newspapers and on newswires. Our results show that negative media coverage reduces the probability of a firm making an acquisition. It does so by playing a number of governance roles: We find that negative media disciplines managers, by influencing turnover decisions and escalating costs of acquisitions, and shapes ingratiatory behavior of managers, by giving useful feedback and providing an efficient platform for self-disclosure. Our results further show that distinct media sources (newspaper and newswire) play governance roles differently. We document that newspaper items primarily provide important feedback to managers by inducing the market reactions to M&A announcements and influence CEO turnover decisions. On the other hand, besides influencing CEO turnover decisions, negative newswire coverage weakens a firm's bargaining power which leads to a higher acquisition premium and indicates a lower long-term operating performance in the post-acquisition period.

Keywords: Mergers and Acquisitions (M&As), Media Coverage, Newspaper, Newswires.

JEL Classification: G14, G34

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"Do not fear the enemy, for your enemy can only take your life. It is far better that you fear the media, for they will steal your HONOR." - Mark Twain.

In the course of reporting events and relevant analyses, financial media reveals important information to investors and managers. Recent research shows that media coverage has a systematic effect on stock market activity[1], but studies that examine the media's impact on significant corporate decisions are scarce. In this study, we investigate whether and why managers of publicly listed U.S. firms are sensitive to media coverage while making mergers and acquisitions (M&As) decisions. Dyck, Volchkova and Zingales (2008) show that by playing a corporate governance role, media can influence managerial actions and corporate decision-making process. We extend their theoretical framework to understand media's role in M&A decisions.

Extant literature suggests that media can play two distinct roles of corporate governance. It can play a traditional disciplining role of mitigating agency problem that would constrain the opportunistic behavior of managers (Dyck, Volchkova and Zingales, 2008; Dyck, Morse and Zingales, 2010). Other recent studies suggest that media can also play a corporate governance role by inducing 'ingratiatory behavior' among managers (Westphal and Zajac, 2013). Westphal and Zajac argue that managers tend to pay attention to external opinions (such as, opinions expressed by media) and conform to the norms of business environment to alleviate pressure from internal and external monitors and stay away from negative limelight. Especially, earlier

[1] Tetlock (2007, 2011), Barber and Odean (2008), Fang and Peres (2009), Peress (2011), Fang, Peress and Zheng (2011), Engelberg and Parsons (2011), Loughran and McDonald (2011), and Dougal et al. (2012).

studies (Tetlock, 2007; Tetlock et al., 2008; Loughran and McDonald, 2011) show that negative media coverage matters the most in terms of affecting investors' opinion, stock returns and trading activities, while articles with a positive tone are largely ignored and discounted. Accordingly, we focus mainly on the corporate governance role of negative media coverage on M&A decisions.[2]

In light with the corporate governance framework, we propose and examine the following research questions: First, does negative media coverage lower the probability of acquisitions? We predict that media's disciplining role and induction of ingratiatory behavior among managers would lower the appetite for M&A activities, if a firm is faced with negative media coverage. Second, what channels do media use to exhibit its disciplining role and instill ingratiatory behavior among managers? Answers to the second question would present some plausible explanations as to how and why negative media coverage reduces acquisition probability.

While examining the above research questions, it is important to note that not all media sources are homogeneous and hence we need to disentangle the effects of different media sources to understand media's corporate governance role more clearly. As Ahern and Sosyura (2013) identify, there are two broad categories of news media sources: independent newspapers (e.g. the Wall Street Journal, the New York Times) that incorporate journalists' viewpoints, and newswires (e.g. the Dow Jones news service) that typically report firm press releases with no additional analysis. The first category of news (newspaper items) is expected to reveal independent views on firms and their activities, while the second category (newswire items) is likely to report internal developments (e.g. production difficulties, firm-specific risks, current

[2] In economics, a similar proposition (i.e. more attention to negative news) is put forward by Kahneman and Tversky (1979) in the form of Prospect Theory. This theory suggests that individuals care more strongly about a loss in utility than they do about a gain of equal magnitude. In general, individuals are risk averse.

and future earnings, business expansion plan) and convey credible signals to investors and other market participants. Both categories could be effective in disciplining managers and shaping their ingratiatory behavior, albeit differently. Newspaper items are more effective in swaying investors' mindset (Engelberg and Parsons, 2011) and hence can exert pressure on managers and boards to take corrective actions ('disciplining role') and can give important feedback to managers by influencing market reactions to M&A announcements ('shaping ingratiatory behavior'). On the other hand, negative newswire coverage indicates internal problems in the firm and makes investors aware of it. Depending on the extent of unfavorable internal developments, this in turn creates pressure on the firm's governance structure (e.g. board) to take punitive actions against top managers. Also, as negative developments are reported through newswires, top managers may consider leaving the firm because of their reputational cost. This way, newswire coverage could play a 'disciplining role', although indirectly. Furthermore, by allowing fast and effective self-disclosures to a wider audience, newswires provide a platform to the managers to manifest their ingratiatory behavior. By making credible disclosures, managers can cater to the informational demand by outsiders and alleviate the risks of bad reputation.

In light of the above discussion on media's corporate governance role, we address our research questions by collecting and analyzing approximately 935,000 news items published by top newspapers and newswires on S&P 1500 firms during the 1990-2009 period. In order to obtain a general idea of the media's impact, we first examine the economic significance of market reactions attributed to media coverage. Following Moeller et al.'s (2004, 2005) approach of economic significance analysis, we find that acquiring firms that did not have any negative news coverage prior to the acquisition year had, on average, a dollar abnormal return of -$1.4 million around the acquisition announcement date (-1 to +1 day). In contrast, the acquiring firms

that experienced negative news coverage prior to the acquisition year had, on average, a -$101.1 million dollar abnormal return. These results indicate that media coverage can influence M&A outcomes and relevant decisions.

Although univariate economic significance analysis presents some useful information, it does not include a set of other control variables that could alter the results. Consequently, we carry out multivariate tests to examine our main research question: does negative media coverage lower acquisition probability? Our results show that negative media coverage reduces the probability of a firm making an acquisition. This is an important finding as it shows that negative media coverage could influence a firm's corporate decisions at the early stage.

Subsequently, we address the second research question by examining the channels through which media plays its corporate governance roles and lower the acquisition probability of a firm. We do so by focusing on how media: (a) disciplines managers, hence playing a role in alleviating agency problem, and (b) shapes ingratiatory behavior of managers, thus highlighting the behavioral aspects of governance theory.

While examining the disciplining role of media coverage, we focus on three channels by which media affects (i) CEO turnover decisions, (ii) CEO's tangible wealth change, and (iii) acquisition premium. Our results show that if a firm decides to make an acquisition despite negative media coverage in the pre-announcement period, the probability of CEO turnover increases in the subsequent years and the firm has to pay a higher acquisition premium. However, our results do not show any significant relationship between pre-announcement period media coverage and a CEO's tangible wealth change. Further investigation shows that CEO ownership itself is negatively related to acquisition probability, which offers a plausible explanation for an insignificant relationship between media coverage and a CEO's tangible

wealth change. Overall, our results show that media could play a powerful role by influencing a CEO's turnover resolution and escalating the cost of acquisition through increased premiums, which in turn would restrain a manager from making an acquisition and motivate her to adopt a more disciplined approach with respect to significant and risky corporate decisions, like M&As.

Subsequently, we examine the channels by which media influences a CEO's ingratiatory behavior. Specifically we look at (i) how media (independent newspapers) gives useful feedback to managers on M&A events, and (ii) how managers use media (newswires) to disseminate firm-specific information that is useful to predict a firm's post-acquisition performance[3]. We find that if a firm decides to make an acquisition despite negative media coverage in the pre-announcement period, (i) the market reacts more negatively to such acquisitions, which gives an important feedback to managers, and (ii) the long-term operating performance of the combined firm suffers significantly in the post-acquisition period.

Quite interestingly, as predicted, our results further show that distinct media sources (newspaper and newswire) play governance roles differently. We find that, newspaper items primarily provide important feedback to managers by inducing the market reactions to M&A announcements and influence CEO turnover decisions. On the other hand, newswires present efficient platforms to the managers to release firm-specific information that contains credible signal about internal turbulence and future prospect of the firm. Our results show that besides influencing CEO turnover decisions, negative newswire coverage weakens a firm's bargaining power which leads to a higher acquisition premium and indicates a lower long-term operating performance in the post-acquisition period.

[3] Credible self-disclosure in media (newswire) would help a manager build her reputation and alleviate pressures from external monitors. By catering to the informational demand of the investors, managers manifest their ingratiatory behavior.

Although our results are consistent with our prediction that media coverage can influence the M&A decision-making process, endogeneity is still a concern. Reverse causality and omitted variables that can simultaneously affect media coverage and M&A outcomes may confound our results.[4] We address these concerns in several ways. First, we use a 2-year lagged media coverage variable which is less likely to be influenced by subsequent M&A decisions. We obtain similar results. Second, we focus on the sub-sample of newswire items more closely as newswire items could be manipulated in anticipation of acquisition decisions. We divide the sample into two groups: with high managerial quality and low managerial quality.[5] It is expected that newswire items are not actively managed by the managers in the 'high managerial quality' group. However, in both groups we find that negative newswire coverage affect acquisition probability negatively and significantly. Third, we address the issue of omitted variable bias by controlling for CEO overconfidence (Malmendier and Tate, 2008) and managerial quality (Masulis et al. 2007) in the regression models. Our results remain qualitatively unchanged. Fourth, we use fixed effect regression models that are less susceptible to omitted variable bias (Palia, 2001; Flannery and Rangan, 2006).

Our study makes some important contributions to the existing literature. First, we focus on the ex-ante rather than ex-post media coverage on the firm and how it affects a manager's M&A decision.[6] Our results show that if managers pay attention to market feedback embedded in prevalent media coverage, there is an increased probability that managers can avoid making value destroying acquisitions. Second, we use an *extended* corporate governance theoretical

[4] Although in a contemporaneous study, Liu and McConnell (2013) find that reverse causality does not plague the relationship between negative media coverage and abandonment of an acquisition attempt.

[5] Following Masulis et al. (2007) we use past earnings growth as a measure of managerial quality.

[6] Other studies examine the role of media coverage either after the beginning of private negotiations (Ahern and Sosyura, 2013) or after the public announcements (Liu and McConnell, 2013).

framework that includes both traditional governance forces that discipline an opportunistic manager and behavioral aspects that shapes a manager's decision-making process and actions. We find that media coverage is a natural fit in this extended governance framework that can play a governance role of disciplining a manager and influencing manager's ingratiatory behavior. In that respect, we find it is useful to examine the effect of overall media coverage (newspaper and newswire together), newspaper coverage and newswire coverage separately to reveal different governance roles of media. Earlier studies have focused either on a single media source (i.e. newspaper or newswire) or a combined media source in their analyses.

Third, we contribute to the growing literature on media coverage by highlighting its relevance to the corporate decision-making process. As mentioned above, prior work emphasizes the media's influence on stock prices and trading activities (Tetlock 2007, 2011; Peress, 2011), the media's role in forming investor opinion (Engelberg and Parsons, 2011; Dougal et al., 2012), the determinants of media focus and how news items are developed (Dyck et al., 2010), media manipulation by firms for strategic gains (Ahern and Sosyura, 2013), media's role in abandoning an acquisition (Liu and McConnell, 2013), and the media's role on advertisement and commercial gains (Reuter and Zitzewitz, 2006). By contrast, this paper looks at the ability of prevalent media coverage to impel future managerial decisions.

The remainder of the paper is organized as follows. In Section I, we discuss the relevance of newspaper and newswire coverage and present different channels by which media plays the role of corporate governance. Section II presents our sample. Section III presents key variables, summary statistics and economic significance of media's influence on M&A deals. Section IV presents the results from multivariate analysis. Section V discusses robustness tests and Section VI concludes.

I. Power of Media and Its Role in Corporate Governance

A. Is Media Powerful? Empirical and Anecdotal Evidence

Extant literature shows that media coverage can sway investors' sentiments. The media's effect on investor's behavior and actions is evident in stock returns and stock trading (e.g., Tetlock 2007, 2011; Fang and Peress, 2009; Peress, 2011). In a recent study, Engelberg and Parsons (2011) examine the role of local media coverage on local investors and find that local media coverage strongly predicts local trading. A subsequent study by Dougal et al. (2012) reinforces this finding. They find that financial journalists have the potential to influence investor opinion, at least over a short time horizon. Dyck, Volchkov and Zingales (2008) show that media could make managers revoke their controversial decisions and actions. In the Russian context, Dyck, Volchkov and Zingales (2008) find that the magnitude of corporate governance violations at the firm level increases the extent to which the events are covered in Anglo-American newspapers. The study also reports that a significant negative press coverage in Anglo-American newspapers compel Russian firms to revoke their decisions. Another set of studies examine the effect of media coverage on managerial behavior and actions. Kuhnen and Nissen (2012) examine whether public opinion, proxied by media coverage, influences the level and structure of CEO compensation. Also, anecdotal evidence shows that corporate boards can take serious actions against top management following damaging media coverage on firms. For example, in the case of the Diamond Foods' accounting scandal, the board decided to replace both the CEO and CFO of the firm (Wall Street Journal, Feb 8, 2012). In another widely publicized event, British Petroleum's massive oil spill in 2010, the board of the firm eventually decided to dismiss its CEO, Tony Hayward. In summary, empirical and anecdotal evidences show that media coverage is likely to affect investor's perceptions and play corporate governance roles.

B. Newspaper vs. Newswire Coverage: What do they tell us?

As we mentioned earlier in the paper, there are two different categories of news media (Ahern and Sosyura, 2013): newspaper (portrays independent viewpoints) and newswire (mainly feature firm originated news). Since both categories could play important corporate governance roles, it would be useful for to understand how these different media categories influence managers and investors.

B.1. Independent Media Coverage – Newspaper Items

Engelberg and Parsons (2011) present a useful model that helps understand the mechanisms by which the independent media can exert its influence on investors. According to this model, investors demand for a particular firm's security is a function of firm characteristics and media coverage: D(X, M(X, Y)), where M is the media coverage, X is a set of firm characteristics that potentially determine both media coverage and investor demand, and Y is a set of characteristics that only influence media coverage. Derivative of the demand function leads to the following:

$$dD = \frac{\partial D}{\partial X} dX + \frac{\partial D}{\partial M}\frac{\partial M}{\partial X} dX + \frac{\partial D}{\partial M}\frac{\partial M}{\partial Y} dY \quad (1)$$

The first term refers to how investors' demand changes with respect to firm or market fundamentals and this effect is independent of media coverage. This term refers to the 'innovation in knowable facts'. The second term refers to the key mechanism by which the media can shape investors' opinions. This term shows that even for a particular set of firm facts (X), how media process the same information matters. As Engelberg and Parsons posit "media makes knowable facts actually known" (p. 71). In case of independent newspaper stories, journalists have the scope to process the available information further; thus newspaper items are more likely to influence investor opinions. As explained in the later section, through a number of

different channels newspaper items could play effective roles in disciplining an opportunistic manager and influencing their ingratiatory behavior.

B.2. Firm-originated Media Coverage – Newswire Items

Newswire outlets provide managers an opportunity to disclose important internal developments (e.g. production difficulties, firm-specific risks, current and future earnings, business expansion plan) to investors and other market participants. However, while making self-disclosure through newswire items, there is always a possibility that the management is hiding unfavorable developments in the firm and revealing only selective pieces of information; Healy and Palepu (2001) call this the 'lemons' problem. They explain that, "because of the lemons problem, there is a demand for information intermediaries, such as financial analysts and rating agencies, who engage in private information production to uncover managers' superior information" (Healy and Palepu, 2001, p. 408). Due to this external monitoring, which is more prominent in developed economies such as the USA, not all managers are likely to engage in active media management. Healy and Palepu (2001) conduct a comprehensive review on disclosure regulation, information intermediaries, and the determinants and economic consequences of corporate disclosure. They find that, in general, investors view voluntary disclosure as a source of credible information.[7]

By reporting important firm-specific information, newswire items could play important corporate governance roles. Especially, as we expect that due to self-reporting bias there will be lower negative content in newswire items vis-à-vis newspaper items, negative newswire coverage is likely to give stronger and more credible signal to investors and market participants

[7] Also, from Ahern and Sosyura's (2013) study it is evident that although firms gain initially through active media management (using newswires), market penalizes these actions once true information is revealed to the public. This outcome raises questions about the net benefit of an active media management strategy for shareholders. Consequently, not all shareholders are likely to support this kind of strategy and it may not be practised by all firms.

regarding unfavorable internal developments (e.g. production difficulties, firm-specific risks, current and future earnings, business expansion plan). Significant negative disclosures in the newswires could indicate that corporate board might take disciplining actions against managers. Furthermore, newswire outlets give an opportunity to the managers to satisfy external informational demand and maintain their reputation of being transparent to the investors. In the subsequent section, we will identify a number of channels by which newswire items play their governance roles.

C. Media's Role in Corporate Governance

Although there is no formal theory on media coverage and how it impacts corporate decision-making, recent studies have relied on 'the theory of corporate governance' to explain media's effect on corporate decisions (Dyck, Volchkov and Zingales, 2008; Kuhnen and Nissen, 2012). Traditionally, the theory of corporate governance has focused on agency problem (i.e. principal-agent conflict) which revolves around economic and legal issues that are attributed to the lack of interest alignments between managers and shareholders (Fama and Jensen, 1983; Hambrick, von Werder and Zajac, 2008). This traditional theory of corporate governance takes the view that individuals pursue their own goals on the basis of their self-interest and personal risk-preferences. Under this view, it is expected that an effective corporate governance mechanism would discipline an opportunistic and self-fulfilling manager. More recently, Westphal and Zajac (2013) have proposed a behavioral theory of corporate governance. According to their view a corporate manager's behavior and actions will be influenced by her social surrounding and personal experiences, in addition to the traditional governance forces (such as board, legal environment). Managers are likely to adhere to the norms of respective business environment, listen to others' opinions, and make credible corporate disclosures. This is

termed as 'ingratiatory behaviour' of managers. Ingratiatory behavior is likely to alleviate pressure from external monitors such as institutional investors and regulators on managers (Dyck, Volchkov and Zingales, 2008) and keep them away from negative limelight.[8]

According to the *extended* corporate governance theory (combination of agency theory and behavioural theory of corporate governance) as discussed above, a credible governance mechanism could play a disciplining role in mitigating agency problem (Fama and Jensen, 1983; Jensen and Meckling, 1976; Hambrick, von Werder and Zajac, 2008) and/or shaping ingratiatory behaviour of managers (Westphal and Zajac, 2013; Dyck, Volchkov and Zingales, 2008). We take the view that media could be effective in playing both roles through different channels. We discuss these roles below.

C.1. Media's Disciplining Role

As access to media has become easier and less expensive, investors, shareholders, and internal monitors (e.g. board members) are likely to retrieve information from media coverage more readily and take necessary actions. Thus, media coverage, especially the negative coverage, would create pressure on managers and refrain them from undertaking risky ventures (such as M&As) that are not favoured by investors and shareholders. Below, we present a number of channels through which media fulfills its disciplinary role.

Reputational Cost and Prospect of CEO Turnover: Managers are likely to pay more attention to media coverage as it can impact their reputation and cause termination from the job. Following Dyck et al. (2008), we take the view that the effectiveness of independent media coverage depends on the relative weights of (i) the CEO's private benefits, and (ii) the CEO's

[8] In the investment literature, we find that analysts show ingratiatory behaviour. The analysts who deviate significantly from consensus stock recommendation or earnings forecasts are evaluated negatively by their peers (Daniel, Hirshleifer, and Subrahmanyam, 1998; Scharfstein and Stein, 1990).

reputational costs and legal actions (i.e. punishment) he/she faces from the regulatory authority and board of directors (and majority shareholders). Becker's model (1968), as presented in Dyck et al. (2008), captures the dynamics under which a manager would restrain himself from making a self-fulfilling decision, as follows:

$$Expected\ (Private\ benefit) < Expected\ (Reputational\ cost) + Expected\ (Punishment) \quad (2)$$

Earlier studies posit that managers receive unobservable private benefits as a result of M&A activities (Jensen, 1986; Morck, Shleifer, and Vishny, 1989; Dyck, Volchkova, and Zingales, 2008). According to the model presented in equation 2, managers would refrain from wrongdoing if they realize that there is significant risk of reputational costs and punishment that outweigh private benefits. As Dyck, Volchkova, and Zingales (2008) argue, media coverage can impact both of the right hand constituents (i.e. reputational costs and punishment), which in turn can affect managerial actions. Earlier studies posit that managers are concerned about their reputation vis-à-vis potential employers as it may affect their future benefits and tenure in a firm. A bad reputation would lower the opportunity for a manager of re-entering the 'labor market' (Fama and Jensen, 1983; Dyck, Volchkova, and Zingales, 2008).

Negative media coverage may indicate a less favorable time for making an acquisition by a firm and may lead to shareholder wealth destruction. Such an occurrence would further damage a firm's reputation and the CEO's credibility, which could lead to disciplinary actions against the CEO. This may also persuade a CEO to leave a firm voluntarily due to reputational concerns. We also expect that both independent newspaper coverage and firm originated newswire coverage would influence CEO turnover decision. While newspaper coverage causes reputational concern for a firm and could influence a CEO turnover decision, negative newswire coverage indicates a self-reported poorer firm performance for which CEOs could face a termination decision.

Impact on CEO's Tangible Wealth: Liu and McConnell (2013) supplement Becker (1968) and Dyck, Volchkova, and Zingales (2008) model by arguing that in addition to the unobservable private benefits, we also need to consider CEO's tangible benefit while comparing with 'reputation cost' and 'punishment' to understand a CEO's decision making process. As many CEOs hold sizeable stock ownership in their own firm, any negative impact on stock price would affect a CEO's tangible wealth that is tied to a firm's stock market performance. A prospect of negative impact on CEO's tangible wealth change would reduce a CEO's appetite for M&A activities (Lehn and Zhao, 2006). Extant empirical evidence shows that M&As are very significant and risky corporate decisions in which acquirers tend to make no gains or mostly lose money as market reacts unfavorably to such announcements (Bruner, 2004). We expect that negative media coverage prior to the M&A announcement would make market participants more wary of an acquisition attempt which could lead to more wealth destruction around the M&A announcement dates. Such a prospect for CEO's tangible wealth destruction would make her less interested in acquisitions if there is negative media coverage while a CEO is planning for an acquisition. Following Engelberg and Parsons (2011), who argue that how media process a particular news item matters in affecting investor opinions, we further propose that primarily newspaper coverage would impact CEO's tangible wealth change around the M&A announcement dates. Newswire items are firm originated news stories which are generally published without alterations and hence are less likely to impact market reactions to M&A announcements.

Cost Escalation and Increased Acquisition Premium: Mass media, such as newspapers, disseminate information to a broader audience and draw public attention more effectively. The pervasiveness of modern media can influence the mindset of broader business communities,

regulators, and investors simultaneously (Dyck, Volchkova, and Zingales, 2008). This can directly affect a firm's cost of doing business. Generally, it is evident that firms take steps to lessen the damaging effect of negative media coverage. Dyck, Volchkova, and Zingales (2008) argue that in developed economies, firms are likely to undertake countervailing lobbying efforts if they are being targeted by negative press coverage.[9] Fang and Peress (2009) posit that though mass media may not convey genuine news, its greater audience reach can affect a firm's cost of capital. Given that bad news attracts more attention (Loughran and McDonald, 2011), Fang and Peress's observation will be more relevant for negative news coverage. Similarly, Gomes (2000) posits that bad reputation has implications for financial costs and the future profitability of the firm. As Dyck, Volchkova, and Zingales (2008 p. 1099) note, "To the extent a company needs to access financial markets repeatedly, its reputation will affect the terms of future financing." Therefore, it is likely that negative coverage increases the cost of doing business for a firm. In view of these empirical and anecdotal evidences, we contend that it would be more expensive for a firm that has experienced negative media coverage in the recent past to pursue M&A activities. An investigation of media's impact on acquisition premium would illustrate this phenomenon. Negative media coverage of an acquiring firm is likely to reduce an acquirer bargaining power and compel it to pay a higher acquisition premium. The prospect of paying a higher premium would make it difficult for a CEO to justify an acquisition. If empirically supported, this would

[9] For example, when a massive oil spill started in April 20, 2010, British Petroleum (BP) initially tried to downplay the incident. BP's CEO of the time, Tony Hayward, implied that a relatively small oil spill in a big ocean would not cause any significant harm. However, relentless media coverage of this event influenced public opinion significantly and put considerable pressure on BP. Towards the end of May 2010, BP hired Anne Kolton, the former head of public affairs at the U.S. Department of Energy, as the head of BP's media relations in the U.S. The public relations (PR) efforts escalated at BP and the firm ran numerous ads on TV, newspapers, and in other media outlets in an attempt to rebuild its shattered reputation. The firm spent a significant amount of money and time on damage control. For the first three months of oil spill alone BP spent more than $90m on PR efforts and announced multi-million dollar scientific studies and conservation plans (The Guardian, April 14, 2011). In July 2010, CEO Tony Hayward resigned.

show a channel by which media can play a corporate governance role by curbing managerial interests in acquisitions.

C.2. Media Shaping a Manger's Ingratiatory Behavior

The primary argument of behavioral corporate governance theory is that managerial behavior and actions are not only governed by traditional governance mechanisms that tend to address and alleviate agency problem, but also on the social surrounding and personal experiences of managers (Westphal and Zajac, 2013). According to this behavioural aspect of corporate governance theory, managers pay attention to surrounding opinions and align her actions that reflect public opinions – this receptive and confirmatory behaviour is termed as 'ingratiatory behavior' of managers. Media plays an important role in shaping ingratiatory behaviors among managers by giving important feedback to managers (newspaper items) and providing an efficient and fast medium to disseminate firm originated news (newswire items). Below we discuss the channels by which media can shape ''ingratiatory behavior' of managers.

Managers' Attention to Media Feedback: Earlier studies report that managers extract information from market reactions and pay attention to market sentiment (Luo, 2005; Kau, Linck, and Rubin, 2008). In the modern information age, it is conceivable that, at times, outside investors and market participants collectively might have superior information and a better understanding of the weaknesses of a proposed deal than the mangers of the firm (Jegadeesh, Weinstein, and Welch, 1993; Dye and Sridhar, 2000). Dye and Sridhar (2000) posit that the information flow between capital markets and firms need not be unidirectional; managers can also learn from information revealed by capital market channels and participants and utilize this information to improve their investment decisions (Luo, 2005). In a broader sense, the media can be considered as a channel for revelations about capital market information. Journalists gather

information from various inside and outside sources (including investors, regulators, competitors, suppliers etc.) and share the information through various media channels. As stated above and supported by extant literature, the effectiveness of media anticipation and feedback to the managers depends on media coverage's power to sway investors' opinions and perceptions. In line with Dyck et al. (2008), we argue that investors will view independent newspaper coverage as a more credible source of information as compared to the firm-originated newswire sources.[10] It is also important to note that media can give feedback to managers two ways: (a) managers can learn from media's perception on their own firm and their own corporate decisions, or (b) managers can take a lesson from media's opinion about other firms in the industry and those firms' corporate decisions.[11]

Self-disclosure in Newswires: As we mentioned above, managers can make important self-disclosure by using newswire media; generally newswires publish such firm originated press releases in original form. One advantage of such disclosure is that firms can disclose its information to a wider audience almost instantaneously. Further, as pointed out by Healy and Palepu (2001), investors in developed economies generally view voluntary disclosure as a source of credible information. Therefore, firms can use newswire items to send important and effective signal to investors and other market participants. This argument will be more fitting for the negative disclosures, as firms are less willing to disseminate negative news to the investors and market participants. Dissemination of credible signals through self-disclosures in newswires

[10] Dyck et al. (2008) posit that media coverage become more effective when it comes from a credible source and reaches more people. These two characteristics are important for media to convey a more credible signal.

[11] For example, Firm A has made an acquisition despite negative media coverage and market reacts quite negatively to such acquisitions. This will give an important feedback to another firm (Firm B) in the industry. It is likely that Firm B will be more cautious in making an acquisition if there is negative media coverage on the firm.

reflects another form of managerial ingratiatory behavior. Through self-disclosure managers cater to demand for the timely and credible internal information by investors and market participants. In the context of M&A, this *Self-disclosure* can have several implications. For example, negative disclosure could imply operational difficulties and indicate that the firm would have difficulties in integrating a target. This could negatively impact long-term operating performance of a firm. Also, self-disclosed negative media coverage of an acquiring firm could reduce its bargaining power and compel it to pay a higher acquisition premium.[12]

II. Sample Description

A. Initial Set of Firms

Our initial sample consists of all firms included in the ExecuComp database as of 2010. The ExecuComp database covers the firms that are included in the S&P 1500 Index. It also retains coverage of firms that ceased to be part of the S&P 1500 Index. ExecuComp contains 2,843 firms, both active and inactive. For each of these firms we collect M&A data and relevant variable information (such as payment type, related/unrelated acquisition tag, transaction value, announcement date, completion date, withdrawal date, percentage of acquisition stake) from the SDC database. To be included in the analysis, we require that the M&A transaction value is at least $50 million USD, the target firm must not be in the financial services or public utility sector (i.e. we exclude firms with SIC codes 4900-4999 and 6000-6999), and the acquisition attempt is classified as 'complete' or 'withdrawn'.

B. Media Search

[12] Fang and Peress (2009) posit that though mass media may not convey genuine news, its greater audience reach can affect a firm's cost of capital. In view of Fang and Peress's argument, we contend that it would be more expensive for a firm that has experienced negative media coverage in the recent past to pursue M&A activities.

We follow Malmendier and Tate (2008) and Core et al. (2008) in identifying a set of media sources (both newspapers and newswires). We search these media sources for the firms (2,843 in total) identified using the ExecuComp database and download all relevant articles for the period from 1990 to 2009. We used Factiva[13] database for our news article search. Factiva recognizes many spellings and offers suggestions as to what company it believes the user is searching for. This ensures the results are relevant to the company searched. We analyze the articles that have a minimum of 50 words in the content. While downloading the articles, we ignored duplicates. Whether an article was a duplicate or not was determined by setting the duplicate option in Factiva to "identical." For this study, we performed content analysis for a number of word lists based on Loughran and McDonald (2011) and Malmendier and Tate (2008). Table I outlines the list of newspapers and newswires considered in this study.

Insert Table I about Here

Content analysis was completed with use of a Text Search program, specifically designed for this study. The Text Search program searches for the existence of specified terms and allows for the creation of search strings containing the operators AND, OR, and NEAR[14].

IV. Key Variables, Summary Statistics and Economic Significance of Media Coverage's Influence on M&A Deals

A. Key Variables Construction

The main independent variables in our analyses are the ratio of negative toned articles (*Negative media*) among all published articles related to an acquiring firm prior to the M&A event. However, the extant literature shows that a set of other variables (e.g. firm and CEO

[13] Core et al. (2008) rely on Factiva for media coverage. Although Factiva covers most of the influential media sources, it has limited Business Week coverage. However, as shown in Core et al., business magazines contain very few articles on specific firms compared to newspapers and newswires.

[14] That is, can search for words within a specific range of other assigned word.

characteristics, M&A characteristics) could also play a significant role in M&A decisions and outcome. Accordingly, we incorporate a set of control variables in all of our regression models to ensure the robustness of the results. Appendix A presents all variable descriptions.

A.1. Negative and positive word lists and measures

In order to search for negative and positive words, we have used a relatively new list proposed by Loughran and McDonald (2011), available from Bill MacDonald's website. Many earlier studies used Harvard-IV-4 word lists to determine the overall positive or negative tone of an article. However, as mentioned above, Lougran and McDonald (2011) show that there are some drawbacks in using Harvard-IV-4 negative and positive words lists in the context of finance studies. The main criticism is that Harvard-IV-4 word lists are not specific to business terminology. When searching for negative words, one of the challenges is to account for the simple negation of the positive words. We follow Loughran and McDonald's approach to mitigate this problem. Once we identify the number of negative and positive words in an article, we construct our main variables of interests: The ratio of negative toned articles (*Negative media*).

In order to determine the overall tone of an article, we follow Malmendier and Tate's (2008) CEO overconfidence variable construction methodology where they compare two different word lists ('cautious' and 'confident' word lists) in order to create the *CEO overconfidence* variable. Accordingly, for each article we compare the number of negative and positive words appearing in an article. If the number of negative words is more than the number of positive words, it is classified as a negative toned article. In order to obtain the *Negative media* variable, we divide the number of firm-specific negative toned articles by the total number of firm-specific articles within a particular time period (for example, over -2 to -365 day with

respect to an M&A announcement or over a calendar year). As a 'robustness check' we also develop another measure of media tone following Tetlock et al. (2008) and Ahern and Sosyura (2013).

A.2. Control variables

Consistent with earlier studies (Masulis et al., 2007; Malmendier and Tate, 2008; Ahern and Sosyura, 2013), we include a number of bidder, M&A deal and CEO characteristics in the multivariate analysis. These variables are discussed below.

Bidder Characteristics: The extant literature shows that *Tobin's Q* can affect M&A outcome and related strategic decisions. According to the Q theory, as a higher Tobin's Q refers to better investment opportunities for a firm and higher managerial efficiency, it is likely to provide more legitimacy and influence managers to make more acquisitions (Dong et al., 2006; Roll, 1986). Prior studies report mixed evidence on the relationship between Tobin's Q and market reactions around the announcement date (Dong et al., 2006; Moeller, Schlingemann, and Stulz, 2004; Lang, Stulz, and Walking, 1989; Servaes, 1991). *Firm size* is another important determinant in M&A activities. Larger firms are likely to make more acquisitions (Moeller et al., 2004; Malmendier and Tate, 2008; Masulis et al., 2007). As Masulis et al. (2007) posit, *debt* (leverage) plays an important role as a governance mechanism. A higher debt level reduces managerial controlling power that may prohibit managers from undertaking more risky ventures such as M&As (Stulz, 1990; Baird and Rasmussen, 2001). Managers with more *free cash flow* have more resources available to them and thus can indulge in empire building (Jensen, 1986). One way to pursue this objective is to make acquisitions. Further, higher level of cash flows eases financing constraints for acquirers. Therefore, it is expected that firms with a higher cash flow would make more acquisitions (Malmendier and Tate, 2008). Finally, *past acquisition*

experience of a firm is likely to affect its future acquisition decisions. If a firm has more experience with M&A activities in the past, it will be more comfortable in making future acquisitions.

Deal Characteristics: Extant literature reports that *target status* influence M&A outcome; acquirers experience significantly positive abnormal returns when they acquire private targets or subsidiaries and negative returns when targets are publicly listed firms (Fuller et al., 2002; Moeller et al., 2004; Masulis et al., 2007; Faccio and Masulis, 2005). The *relative size* of a target compared to the acquiring firm could affect the M&A performance and market reactions. The acquisition of a larger target has a greater economic significance for an acquiring firm (Eckbo et al., 1990). However, on the other hand, it is more challenging to integrate a larger target. Empirical evidence on this relationship does not lead to any consensus (Moeller et al., 2004; Fuller et al., 2002; Dong et al., 2006; Masulis et al., 2007). Earlier studies show that *payment method* affects M&A returns (Myers and Majluf, 1984); the market reacts negatively when an acquiring firm uses stock as a medium of payment (Amihud et al., 1990, Servaes, 1991; Fuller et al., 2002). *Majority control* gives the acquiring firm an opportunity to realize the full potential of synergistic gains. However, at the same time, majority control transfers all the risks of the target firm to the acquirer and the market participants may be more wary of the success of the acquisition. Chari et al. (2010) find that when a developed country bidder acquires a majority control in an emerging (a developed) market target, the market reacts positively (negatively). Datta and Iskandar-Datta (1995) examine the effect of partial acquisition on acquirer returns but do not find any significant results. Malmendier and Tate (2008) posit that the market deems *diversifying bids* unwise and reacts negatively to deals of this kind. A number of earlier studies report the evidence of a diversification discount (Berger and Ofek, 1995; Lamont and Polk,

2002; Malmendier and Tate, 2008). However, some other studies that examine this issue do not find any evidence of the diversification discount (Masulis et al. 2007; Campa and Kedia, 2002; Villalonga, 2004). Competing bids to acquire a target could compel an acquirer to offer a higher premium that may lead to negative returns for the acquiring firm. However, Bradley et al. (1988) and Officer (2003) do not find a significant relation between (i) the number of competing bids and the premium payment, and (ii) the number of competing bids and acquirer returns. Following Masulis et al. (2007), we also control for the transaction events that are undertaken by high-tech firms and involve a high-tech target. In *high-tech acquisitions*, acquirers are likely to overestimate the synergies and underestimate the costs, leading to negative returns (Masulis et al., 2007). Bradley et al. (1983) observe that, in the case of a *tender offer*, an acquiring firm tends to implement a higher-valued operating strategy that is viewed positively by the market participants. Further, as Moeller et al. (2004) state, most of the tender offers are used to acquire public firms and involve cash payments. However, the empirical evidence is inconclusive on this issue (Bhagat et al., 2005).

CEO Characteristics: Jensen and Meckling (1976) posit that *managerial ownership* can play a significant role in mitigating agency problem by aligning managerial interests with those of shareholders'. Lewellen et al. (1985) find a significantly positive relationship between CEO ownership and acquirer returns, and Datta et al. (2001) report a positive relation between a CEO's equity-based compensation and acquirer returns around the announcement date. However, Masulis et al. (2007) do not find any significant relation for any of these measures related to a CEO's equity stake. Malmendier and Tate (2008) argue that CEO overconfidence could be an important determinant of M&A probability; they find that overconfident CEOs are more likely to make an acquisition. Earlier studies employ measures of CEO overconfidence that

are based on actions taken by a CEO and portrayal of a CEO in the media. In this study, following Malmendier and Tate (2008) and Campbell et al. (2011), we use two proxies for the CEO overconfidence variable that are based on a CEO's option exercising behavior and portrayal in the media.

B. Summary Statistics

Table II (Panel A) shows the descriptive statistics of the news media sample. As shown in Panel A, we have analyzed 935,210 articles for our sample; however, in the multivariate analysis where we exclude the deals involving financial services and utility targets, we use 813,340 news articles. As per the final sample, each acquiring firm had approximately 85 total articles, 37 newspaper articles and 59 newswire articles over the one year prior to the acquisition announcement.[15]

Insert Table II about Here

Table II (Panel B) shows the statistics for negative article ratio and negative word ratio. From negative article ratio statistics, we see that majority of the news stories, especially the newspaper stories, is negative. For the entire sample, 56% of the news articles show net negative tones. This is consistent with claims made in the literature that the media is more inclined towards reporting negative events and news. We also break down the sample by two major sources, newswire article and newspaper article. Interestingly, we find a lower ratio of negative articles in newswires (51.4%) than in newspapers (66.4%). The difference is statistically significant at 1% level. As the newswire items primarily originated from the firms themselves, it is not surprising to see that there are fewer negative news items in this category. We see a similar trend with negative word ratio statistics. As the firm originated news articles (i.e. newswire

[15] Note that the sum of average newspaper and newswire articles is not equal to average total articles. Sample size differs in these three instances as some firms did not have newspaper articles, whereas some others did not have any newswire articles in the respective one year period.

articles) are less inclined to report negative events or information, investors and other external market participants are more likely to reply on independent news stories (i.e. newspaper articles) while reacting on M&A announcements.

Table II (Panel C) shows the descriptive statistics of the M&A transactions and media coverage of the M&As in our sample. The acquiring firms' announcement return and operating performance are close to 0.4% and -0.3%, respectively. We find that the CAR based average acquisition premium paid during the sample period was about 39%. On average a CEO experiences a 1% wealth change around the announcement dates and approximately in 15% cases CEOs are terminated or leave the firm within 3-years of the M&A announcements.

We find that a large number of CEOs show the trait of overconfidence (44% according to the media-based measure). We find that the average transaction size ratio (deal size divided by acquirer market cap) of the M&A deals in our sample is 12%. The average size (total assets) of the acquiring firms is about 16.8 billion dollars. The approximate breakdown of our sample is 34% public targets, 35% private targets, and 31% subsidiary targets. We further observe that about 6% of deals were pursued through tender offers and 2.6% of deals had a competing bid. In our sample, 25.7% of the deals were conducted between high-tech acquirers and targets and in 81% of the deals the acquirers achieved majority control.

C. Economic Significance of Media Effect

Following Moeller et al. (2004) and Moeller et al. (2005), in Table III we present the *dollar abnormal return* of the acquiring firms for the period from 1991-2009. *Dollar abnormal return* as defined in Malatesta (1983), is the abnormal return times the firm's equity capitalization accumulated over a specified window. We have reported *dollar abnormal return*

values for the M&A deals for which the relative transaction size (i.e. M&A transaction value divided by the acquiring firm's market capitalization) is at least 1% (Moeller et al., 2004).

Insert Table III about Here

Table III presents the *average dollar abnormal return* and *total dollar abnormal return* over a 3-day period (-1 to +1 day) on a yearly basis for the (i) acquiring firms with no negative media coverage and (ii) acquiring firms with negative media coverage. Firms with negative media coverage have had at least one negative media article in the last year. We measure the impact of the acquisition announcement on the acquiring firm's market cap by multiplying the CAR with the acquiring firm's market cap right before the acquisition announcement. In Panel A, we use CAR (-1, +1) multiplied by the acquiring firm's market capitalization at 'Day -2' to obtain the dollar abnormal return. We use *Negative media* defined earlier as a measure of negative media coverage.

From the results in Table III, we find that acquiring firms that did not have any negative news coverage prior to the acquisition year had, on average, a marginal negative dollar abnormal return of -$1.4 million. The acquiring firms that had negative news coverage prior to the acquisition year had, on average, a -$101.12 million dollar abnormal return in 2010 dollars. This negative average abnormal return is not caused by a few sample years. In almost every year, these firms had negative dollar abnormal returns due to M&As. As a robustness check, we perform analogous analysis for 5-day (-2 to +2 day) dollar abnormal returns and obtain similar results (detail results are not reported here). One issue with the Table III results is that they do not distinguish between firms with low and high negative media coverage. Furthermore, univariate economic significance analysis does not include a set of other control variables.

Hence, we carry out a series of multivariate tests, the relevant results of which are presented in the following section.

IV. Results from Multivariate Analysis

A. Effect of Negative News Coverage on Acquisition Probability

In this section we examine the effect of negative news coverage (i.e. negative toned articles) on acquisition probability in a multivariable regression model. We formalize the empirical set-up with the following regression specification:

$$Pr\{Y_{it} = 1 | M_{it}, X_{it}\} = G(\beta_1 + \beta_2 M_{it} + \beta_3 X_{it}) \quad (3)$$

M is the media coverage measure and *X* is a set of controls. Following Malmendier and Tate (2008) we define a successful M&A event that is represented by *Y* in the above regression specification. *Y* is a binary variable that takes the value 1 if the firm made at least one completed merger or acquisition in a particular firm year. We assume that *G* is a logistic distribution. The null hypothesis is that β_2, the coefficient on the negative news, is equal to zero. We report the results of two-tailed tests even though the negative media coverage hypothesis motivates one-sided hypothesis tests. This implies that the significance of a variable at the 10% level can be interpreted as significant at the 5% level for the theoretically derived one-sided test (Malmendier and Tate, 2008).

Insert Table IV about Here

Table IV presents the fixed effect logistic regression models with different set-ups that examine the influence of negative media coverage (*Negative media*) on the probability of acquisition. Model 1 examines the effect of overall negative media coverage. It shows that the effect of negative media coverage on acquisition probability is negative and significant ($p < 0.01$). It implies that negative media coverage of a firm makes its managers less interested in

making an acquisition. In other words, negative media coverage lowers the probability of acquisition. Model 2 and 3 examine the effects of newspaper and newswire coverage separately and show that these measures also affect M&A decisions significantly. Overall, these results support the notion that negative media coverage lowers the probability of acquisition.

In the regression models, we include the following firm-level controls: the logarithm of total assets of the firm at the beginning of the year as a control for the firm size (*Firm size*), Tobin's Q at the beginning of the year as a control for investment opportunities (*Tobin's Q*), free cash-flow to asset ratio of the firm as a measure of internal resources (*Cash flow*), long-term debt to asset ratio of the firm as a control for external monitoring (*Debt*), and number of acquisitions made in the past five years to account for past acquisition experience (*Past acquisition experience*). It is important to control for the aforementioned variables in the regression model, as they could impact a firm's M&A behavior. Regression results (Model 1) show that *Tobin's Q*, *Firm size*, *Cash flow* and *Past acquisition experience* affect the probability of acquisition positively, whereas *Debt* affects it negatively. A higher Tobin's Q refers to better investment opportunity and managerial efficiency, which gives managers the legitimacy to pursue more acquisitions (Dong et al., 2006). A larger firm size and greater cash flow indicate the availability of resources to make acquisitions; thus, these factors positively influence the probability of acquisition. A higher level of external debt attracts greater monitoring from the board and the creditors. As a result, the firms with a higher debt ratio are more likely to feel constrained in making an acquisition. Finally, our results show that past acquisition experience of a firm affects the probability of future acquisition positively.

Next we examine how media affects a firm's acquisition probability. Earlier in the paper, we have discussed a number of channels by which media can play its corporate governance roles. We explore those channels empirically and present the results in the subsequent sections.

B. Media's Disciplining Role: Various Channels and Corresponding Empirical Evidence

B.1. Reputational Cost and Prospect of CEO Turnover

Negative media coverage can cost a manager his/her reputation and induce corporate boards and other regulatory authorities to take appropriate disciplinary action. In this section, we examine how negative media coverage influences the CEO termination or departure decisions. A CEO can be terminated as a measure of punitive action or may leave a firm due to reputational concerns following negative media coverage. We conjecture that the probability of CEO turnover will increase if a CEO of the acquiring firm makes an acquisition amid negative media coverage.[16]

Insert Table V about Here

Table V shows the impact of negative news coverage on CEO turnover in the acquiring firms. Panel A presents the results with pre-announcement period media coverage (over 1 year prior to the announcement date) as the main independent variable; whereas, Panel B presents the results with post-effective period media coverage (over 1 year after the effective date) as the main independent variable. The dependent variable is a binary variable which equals 1 if the CEO left the acquiring firm up to three years after the acquisition and equals 0 otherwise. We collect CEO turnover information from the ExecuComp database. We do not include the CEO

[16] As Lehn and Zhao (2006) state, extant literature employs two different definitions of CEO turnover depending on the focus of the individual study. Some studies consider CEO turnover as a change in the identity of the individual who holds the office of the CEO. Whereas, other studies make the distinction between forced and unforced departure of CEOs. In this study, we do not distinguish between forced and unforced departure while developing the CEO turnover measure, as both cases are relevant to the monitoring or governance role of media (in the context of equation 2).

turnovers that are based on retirement or illness. We follow Lehn and Zhao (2006) to select the control variables that may affect CEO turnover, including CEO age, cash payment of the deal, CEO ownership, and stock performance before the acquisition. Based on Table V (Panel A) results we find that *Negative media (all articles)* has a significant and positive effect on CEO turnover. It shows that there is a reputational cost for a CEO if s/he decides to make an acquisition despite prevalent negative media coverage (Panel A, Model 1). We further find that the relationship between media coverage and CEO turnover is primarily induced by newswire items (Panel A, Model 3). Although, in this study we primarily focus on the effect of the pre-acquisition period media coverage, Liu and McConnell (2013) argue that post acquisition period media coverage could also affect CEO turnover decision. Accordingly, we further examine the effect of the post effective-date negative media coverage (over 1 year period after effective date of M&A) on CEO turnover. Table V (Panel B) presents relevant results. Based on Model 1 (all news articles), Model 2 (newspaper articles), and Model 3 (newswire articles) results, we find that negative media coverage has a significant and positive effect on CEO turnover in all three instances. These results are consistent with the disciplining role of media coverage in the context of corporate governance theory. These results imply that an increased probability of CEO turnover following negative media coverage would make a CEO less interested in making an acquisition.

B.2. Change in CEO's Tangible Wealth

One of the predictions of corporate governance theory is that CEOs would pay attention to negative media coverage if such coverage is tied to their personal wealth loss. If the market reacts to M&A announcements negatively due to unfavorable media coverage, it could also impact CEOs' personal wealth if s/he has a significant ownership level in the firm. We further

propose that since this wealth loss would be tied to market reactions to M&A announcements, independent newspaper coverage would be the primary driving force behind such wealth loss. We employ OLS regression to explore this issue in this sub-section. Table VI (Panel A) shows the impact of negative news coverage on CEO wealth change in the acquiring firms. Following Liu and McConell (2013) we use 'CAR × CEO ownership' as a measure of CEO wealth change. Model 1, 2, 3 consider the effects of all news articles, newspaper articles and newswire articles respectively. Media variables do not show significant results in any of these three models; it implies that there is no systematic relationship between media coverage and CEO wealth change due to M&A announcement.

Insert Table VI about Here

To understand the potential reason behind this insignificant result we take following steps: we examine (i) the relation between CEO ownership and acquisition probability and (ii) how this relation is moderated by media coverage variable. Essentially, we use equation 3 including CEO ownership variable and an additional interaction term: '*Negative media* × *CEO ownership*' to examine the above mentioned issues. We use similar analysis for negative media coverage with all articles, newspaper articles and newswire articles separately. Table VI (Panel B) presents relevant results. Model 1 (all news articles), Model 3 (newspaper articles), and Model 5 (newswire articles) presents the results with CEO ownership's main effects; whereas, Model 2, 4, and 6 include interaction terms. We find that CEO ownership has a significant and negative effect on the acquisition probability; however the interaction term coefficients are insignificant in all models. It implies while CEO ownership is an important determinant of acquisition probability, this relationship is not influenced by negative media coverage. Fearing wealth loss, CEOs with significant ownership tend to avoid acquisition, which is evident in the

negative relation between CEO ownership and acquisition probability. Therefore, we do not see a systematic relation between negative media coverage and CEO's wealth change in the sample with acquisition events.[17]

B.3. Negative Media Coverage and Premium Paid by Acquiring Firms

It is a common phenomenon that acquiring firms pay a premium for the target shares. As the M&A literature suggests, the target premium may depend on a number of factors. However, little is known about the possible impact of negative news coverage on the acquisition premium. In this section we examine the impact of an acquiring firm's negative media coverage on its acquisition premium. Conventional wisdom suggests that target shareholders have more bargaining power in the event of negative media coverage of an acquiring firm. Consequently, target firms are likely to demand a higher premium for their shares. We formalize the empirical set-up with the following regression specification:

$$Acquisition\ Premium = Fn\ (\beta_1 + \beta_2 M_{it} + \beta_3 X_{it}) \quad (4)$$

Acquisition Premium is the dependent variable that denotes the acquisition premium paid by an acquiring firm for the target shares. We use Schwert's (2000) measure for *Acquisition Premium*: cumulative abnormal returns over (-63, +126) days period for the target shares (Schwert, 2000), *M* is the media coverage measure and *X* is a set of controls. As a media coverage measure, we use the percentage of negative news articles out of total articles in the event year before the acquisition announcement (*Negative media (52 weeks before event date)*). In line with the M&A literature, we use a set of control variables in the regression model.

Insert Table VII about Here

[17] Our results need not contradict Liu and McConnell (2013) results, as we consider the effect of ex-ante media coverage on acquisition probability.

Table VII presents the result for the impact of negative news coverage on acquisition premium. Model 1, 2, 3 consider the effects of total media coverage (i.e. all news articles), newspaper articles and newswire articles respectively. Based on Model 1 results, we find that negative media coverage (*Negative media (all articles))* has a significant and positive effect on acquisition premium. That is, acquiring firms that are subjected to negative media coverage in the previous year need to pay a higher premium for the target firm shares. The results are robust to the inclusion of a set of control variables. As a robustness check, we use the SDC reported premium data as an alternative proxy for the acquisition premium. The SDC database calculates the premium as follows: (Offer price – Target stock price 4-weeks before the acquisition)/Target stock price 4-weeks before the acquisition. Our results are qualitatively similar with this alternative proxy of acquisition premium (regression results are not reported here). These results show that firms with negative media coverage need to pay a higher premium to acquire a firm. We further find that the relationship is primarily induced by *Negative media (newswire)* (Model 3). It implies that self-disclosed negative news leads to more negotiation challenges for the acquiring firms and reduces its bargaining power. Overall these results imply that negative media coverage increases the cost of making an acquisition. Such an increased cost of acquisition will make it more difficult for a manger to justify an acquisition and reduce a firm's acquisition probability.

C. Media Shaping a Manager's Ingratiatory Behavior: Various Channels and Empirical Evidence

C.1. Managers' Attention to Media Feedback

We use market reactions (i.e. abnormal returns) to M&A deal announcements as a proxy for Media feedback on acquisition deals and use standard event-study methodology to estimate

market reactions (i.e. abnormal returns). We argue that if a firm makes an acquisition despite prevalent negative media coverage, market would react negatively to such M&A announcements. This would give a useful feedback to other managers who are planning to make acquisitions. In order to examine the effect of negative media coverage on market reactions (i.e. abnormal returns) we formalize the empirical set-up with the following OLS regression specification:

$$CAR\ (-2\ to\ +2) = Fn\ (\beta_1 + \beta_2 M_{it} + \beta_3 X_{it}) \quad (5)$$

CAR (-2 to +2) is the dependent variable that denotes the cumulative abnormal returns -2 and +2 days around the announcement dates. The abnormal returns are calculated based on a market model that uses an estimation window over a period from day -43 and day -255. *M* is the media coverage measure and *X* is a set of controls. As a media coverage measure, we use the percentage of negative news articles out of total articles in the event year prior to the acquisition announcement *(Negative media).*

In line with the M&A literature, in addition to bidder characteristics we have also included a set of control variables in the regression model. In order to control for the listing status of a target firm, we have created three dummy variables: *Private target*, *Public target* and *Subsidiary target*. In the regression models we include *Private target* and *Subsidiary target* dummies to control for the target's status. *Related acquisition* is a dummy variable that refers to whether a target's business is related to acquirer's business. *Transaction size* refers to the relative size of the deal, measured as a ratio of the transaction value to the acquirer's market capitalization. *Competing bid* is a dummy variable that indicates whether or not there is any other bidder for the same deal. *Tender offer* is a dummy variable that indicates whether or not an acquiring firm has floated a tender offer. *Pure stock payment* is a dummy variable that indicates

whether or not the target has been acquired through pure stock offer. *Majority control* is a dummy variable that indicates whether or not the acquirer achieves more than 50% ownership control in the target firm. *High tech acquisition* is a dummy variable that indicates high-tech transaction events in which a high tech firm (bidder) acquires another high tech firm (target) (Masulis et al., 2007). Details on the various control variables are presented in Appendix A. We control for Fama-French industry fixed effects and year fixed effects in all models.

Insert Table VIII about Here

Table VIII presents results that examine the influence of negative media coverage on the short-term market reactions (i.e. CAR). Model 1 includes the results for *Negative media* effect with all articles, whereas Model 2 and 3 present the results for newspaper and newswire items separately. While we find that overall media variable does not show significant results (Model 1), based on Model 2 results we see that newspaper articles (*Negative media* (*newspaper))* shows a significant and negative effect on CAR. It appears that investors and market participants pay attention to independent newspaper coverage while reacting to M&A announcement (Engelberg and Parsons, 2011). This finding suggests that investors and market participants are likely to be influenced by credible media coverage (Neuhierl, Scherbina, and Schlusche, 2013; Luo, 2005; Kau, Linck, and Rubin, 2008), which in turn would give important feedback to managers. It is likely that managers would listen to such negative feedback and will be less interested in making an acquisition if there is negative media coverage on the firm.

In all three models, we find that a number of control variables show significant results. Consistent with the literature, we find that *private targets* and *subsidiary targets* show a significant and positive effect (Fuller et al. 2002; Moeller et al., 2004; Masulis et al., 2007). *Tender offer* also shows positive effect on *cumulative abnormal return (CAR).* Tender offers are

generally associated with the implementation of a higher-valued operating strategy in the acquired firm (Bradley et al., 1983) and tender offers are often paid for with cash (Moeller et al., 2004). The literature shows that acquiring firms experience positive (negative) abnormal returns for cash (stock) deals (Fuller et al., 2002). Our regression analyses as presented in Table VIII shows similar results. As in Masulis et al. (2007), we find that *Debt*, the variable indicating firm leverage, has a significant and positive effect on abnormal returns. Leverage can limit managerial discretion and could force management to make better acquisitions. Our proxy for Tobin's Q shows a negative and significant coefficient, which is in line with Moeller et al. (2004) and Dong et al.'s (2006) findings. A high Tobin's Q firm generally uses stock as a payment method and tends to pay a higher acquisition premium. These related factors could lead to negative abnormal returns. However, the literature presents some mixed results with respect to the effect of Tobin's Q on abnormal returns. Our results show a significant and negative effect for *transaction size* – a variable that denotes the relative size of the deal. Moeller et al. (2004) report a negative relationship between relative size and CAR for the larger firms. Given that we consider only S&P 1500 firms, the acquiring firms that are included in our sample are large. Although relatively larger deals have greater economic significance, they are difficult to integrate, which may impact synergistic gains negatively. Finally, as in Moeller et al. (2004), we find that larger firms destroy more shareholder wealth around the announcement dates. Masulis et al. (2007) posit that managers of larger firms are more entrenched and may make bad acquisitions.

C.2. Self-Disclosure and M&A long-term performance

According to the behavioral corporate governance theory, managers are likely to make credible self-disclosures which may contain important signal for the performance of future

corporate events. We test this prediction by examining how negative newswire coverage is related to long-term performance of an acquiring firm. Although, both newspaper items and newswire items may contain important information about a firm's future prospect, it is more likely that firm-originated negative media coverage would contain more definitive signal about a firm's future.

A central issue in M&A activity is to seize the 'synergy' opportunity of combined operations that rely heavily on the ability of an acquiring firm to integrate a target firm. Cullinan, Le Roux, and Weddigen (2004) argue that managers of acquiring firms frequently overestimate their capabilities in realizing various categories of synergy, leading to failure in synergy efforts. An unrealistic pursuit of synergy also represents an opportunity cost, as it distracts the manager's attention from core business priorities and other initiatives with real potential (Goold and Campbell, 1998). Negative media coverage could also indicate a lower operating efficiency of a firm. It is plausible that negative media coverage conveys a signal that firms would not be able to integrate a target firm well in the event of an acquisition.

In order to examine how media's signal is effective in gauging future long-term performance of an acquiring firm we formalize the empirical set-up with the following regression specification (Barber and Lyon, 1996; Wang and Xie, 2009):

$$\textit{Long-term operating performance}\ (\text{DID\_ROA}_i) = \text{Fn}\ (\beta_1 + \beta_2 M_{it} + \beta_3 X_{it}) \qquad (6)$$

Long-term operating performance (DID_ROA$_i$) is a relative long-term operating performance measure that captures the changes in the acquiring firm's matching firm-adjusted ROA in the three years after the acquisition compared with the matching firm-adjusted ROA in the three years before the acquisition. The matching sample is created based on the propensity score matching method (Rosenbaum and Rubin, 1983). We control for the negative news

coverage prior to the acquisition, the firm size, Tobin's Q, and financial leverage in the propensity score-matching model. We look for matching firms that did not make an acquisition in the performance measurement period. We use one-to-one matching based on the closest propensity score by year. We calculate a difference-in-difference measure, $DID\_ROA_i = (ROA_{i,t+3} - ROA_{m,t+3}) - (ROA_{i,t-3} - ROA_{m,t-3})$, where $ROA_{i,t+3}$ is the average ROA for acquiring firm *i* in the three years after the acquisition, and $ROA_{i,t-3}$ is the average ROA for acquiring firm *i* in the three years before the acquisition. Accordingly, $ROA_{m,t+3}$ is the average ROA for the matching firm *m* in the three years after the acquisition, and $ROA_{m,t-3}$ is the average ROA for matching firm *m* in the three years before the acquisition. We use *Negative media (52 weeks before event date)* as a measure of negative media coverage. It is the ratio of negative articles (published in both newspaper and newswire) divided by the total number of articles on the acquiring firm in the event year before the acquisition announcement date. Table IX presents the result for the impact of negative news coverage on the long-term operating performance of the acquiring firms (DID_ROA_i). Model 1, 2, 3 consider the effects of total media coverage (i.e. all news articles), newspaper articles and newswire articles respectively. Model 4, 5, and 6 present results for similar effects in order but consider only the public target firms. We include year effects and industry effects in all regression models to control for the differing M&A trends over time and possible variation attributed to different industries.

Insert Table IX about Here

Model 1 shows that total negative media coverage has a negative but weaker (significant at 10% level) effect on the long-term operating performance of an acquiring firm. As it appears from Model 3, the relationship is directed by newswire coverage. Model 3 results show that *Negative media (newswire)* has a negative and significant effect on long-term operating

performance. Extant literature further argue that public targets are more complex and difficult to integrate (Bruner, 2004); and hence contribute to lower operating performance in the post-acquisition period. Accordingly, we examine the impact of negative media coverage on long-term performance for the deals that involve only public targets. Model 4, 5 and 6 present relevant results. Again we find similar but stronger results that *Negative media (all articles)* has a significant and negative impact on long-term operating performance (Model 4) and the relationship is primarily induced by 'newswire negative media coverage' (Model 6).

The results imply that firms with unfavorable internal developments will have difficulties with future business expansion. In the context of an acquisition, it can be viewed that a firm with more negative self-disclosure would struggle to integrate a target firm successfully or realize potential synergistic gains. This view is consistent with the behavioral aspect of corporate governance theory (i.e. 'ingratiatory behavior') that through self-disclosure, especially with the negative ones, a firm gives credible signals about its internal developments, risks and capabilities. A decline in long term operating performance following M&A deals for firms with negative media coverage serves as a cautionary note to managers that a firm should refrain from undertaking takeover activities following negative media coverage.

V. Robustness Test

A. Alternative Measures for the Media Coverage Variable

In this section, we construct alternative measures of negative media coverage to make sure that our results are not sensitive to the variable measurement. First, we follow Tetlock (2007) and Tetlock et al. (2008) to measure the negative tone of media coverage on the acquiring

firm.[18] More specifically, before counting instances of negative words, we combine all qualifying news stories for each firm for the calendar year into a single composite story. We calculate the fraction of negative words in each composite news story for each acquiring firm. We define the measure as:

Negative media (Tetlock) = No. of negative words/ No. of total words

Further, we follow Ahern and Sosyura (2013) to construct a second alternative measure of negative media coverage, *Negative media (Ahern)*. More specifically, we compute the fraction of negative words in each news article and classify an article as negative if it has an *above average fraction* of negative words in each calendar year. In order to have a comparable negative tone measure across the sample firms, we standardize the number of negative articles by dividing the total number of articles published about a firm. Based on these alternative measures of negative news coverage, we retest the firm acquisitiveness models (as presented earlier in Table IV) and find qualitatively similar results (the results are not reported here).

B. Addressing Endogeneity Issue

One important concern with our analysis is the potential endogeneity bias in the empirical set-up. We address this issue in a number of ways. First, we focus on the endogenous relationship – more specifically, reverse causality - between the acquisition probability and negative media coverage. In this study, we use a *one year lag* media coverage variable as the primary independent variable. Therefore, it is less likely that there is a reverse causality between acquisition probability and lagged negative media coverage. Liu and McConnell's (2013) investigation on a similar issue conclude that the relationship between post-announcement period media coverage and acquisition abandonment decision is not plagued by endogeneity bias. As an

[18] However, we do not follow Tetlock et al. (2008) to standardize the measure using the standard deviation of daily negative words ratio since our media sample does not report news articles on each firm on daily basis.

alternative approach, we develop a media coverage variable that is based on lagged 2-year news stories. It is less likely that this variable will be affected by future acquisition probability. Yet, we obtain similar results (i.e. negative media coverage affects acquisition probability negatively) with this modified media coverage variable (results are not reported here). We further focus on the sources of news stories as firm-originated news stories (i.e. newswire items) are more susceptible to reverse causality bias. We take the view that the reverse causality (if present) will be more prevalent in the firms that have low quality managers. Such managers might manipulate firm-originated newswire items. Accordingly, we divide our 'newswire item sample' in two groups: high quality managers and low-quality managers. Following Masulis et al. (2007), we use past earnings growth to account for management quality (*Managerial quality (earnings growth)*) and dividend the sample based on the median value of this variable. We find that in both sub-samples, newswire based media coverage has a significant and negative effect on acquisition probability. It implies that our results are not afflicted by reverse causality bias.

The other factor that could lead to an endogeneity problem is an omitted variable bias. There could be some unobservable bidder traits that may influence the probability of acquisition by a bidder and the profitability or abnormal returns of its acquisitions (Masulis et al., 2007). We include three variables to test this concern: (a) following Masulis et al. (2007) we use past earnings growth to account for management quality and use this measure as a control variable in main regression model (i.e. probability of acquisition); (b) following Malmendier and Tate (2008) we control for CEO overconfidence, as CEO overconfidence could affect acquisition probability and M&A outcome; (c) following Liu and McConnell (2013) we control for overall media attention that can affect M&A decisions. The results are presented in Table X. As we find, our main results remain robust to the inclusion of these variables.

Insert Table X about Here

C. Sample Selection Bias

Although our research uses an extensive M&A sample with media coverage, this sample may still under-represent the universe of the U.S. M&A deals. In order to make sure that our results are not driven by certain types and timings of deals, we follow Heckman (1979) to correct the possible sample selection bias. To that effect, we download 231,507 complete mergers and acquisition records between 1990 and 2009 from SDC database. We only require that each acquisition was made by a U.S. firm and that it contains the following information to compare with the M&As in our sample: transaction value, payment method, public status of the target and acquiring firms, cross-border versus domestic deals, competing bids, tender offers, completed versus withdrawn deals, hostile takeovers, ownership acquired after the acquisition, and the related industry of the target and acquiring firms. Based on these variables, we run a probit model with a dependent variable that equals 1 if the M&A deal is in our research sample and 0 otherwise. Following Heckman (1979), we estimate the probability of the M&A deals to be included in our research sample (i.e., inverse Mills ratio). We then rerun all regression models by including the inverse Mills ratio to correct for the potential sample selection bias. From our results (unreported), we find that the inverse Mills ratio is significant in most of the models, suggesting that sample selection bias might be a concern in our models. However, after controlling for the sample selection bias, we find that the coefficients of negative media coverage measures remain significant and show consistent signs in corresponding models. The results confirm the main findings in the paper.

VI. Summary and Conclusions

We examine the impact of media coverage on the M&A decision-making process. To do that we perform a textual analysis of approximately 935,000 articles that appeared in major newspapers and newswires for leading publicly listed U.S. firms over the period of 1990-2009. Our results show that media coverage does influence the M&A decision-making process significantly. From economic significance analysis, we find that acquiring firms that did not have any negative news coverage prior to the acquisition year had, on average, a very minor negative dollar abnormal return of -$1.4 million dollars, whereas the acquiring firms that experienced negative news coverage prior to the acquisition year had, on average, a -$101.1 million dollar abnormal return in 2010 dollars. In general, we show that media coverage has the power to sway investors' perceptions with regards to a major corporate event such as M&A and managers do take media coverage and investor perceptions into account in their decision-making process.

Our multivariate analysis shows that negative media coverage lower the acquisition probability. Subsequently, we explore a number of channels by which media could influence an acquisition decision in light of the *extended* theory of corporate governance which focusses on the behavioral aspect of governance ('ingratiatory behavior' of managers) in addition to the traditional issue of agency problem ('disciplining role' to contain opportunistic managers). We find significant results for two channels through which media performs its disciplining role. Our results show that negative media coverage in the pre-announcement period increases the probability of CEO turnover and make the acquisition costlier as the firms need to pay higher acquisition premiums. Subsequently, we examine the channels by which media influences a CEO's ingratiatory behavior. We find that market reacts negatively to M&A announcements if firms pursue acquisitions despite negative media coverage. This way, media gives useful

feedback to managers on M&A decisions. Further, we find that mangers make credible self-disclosures in newswires to cater to the informational demand by investors and regulators.

Another important finding of this study is that the nature of the relationship between media coverage and M&A outcome depends on the characteristics of the media source itself. In other words, our results show that independent newspaper items and firm-originated newswire items play their governance role differently. For example, newspaper items provide important feedback to managers by influencing the market reactions to M&A announcements and influence CEO turnover decisions. On the other hand, newswires present efficient platforms to the managers to release firm-specific information that contains credible signal about internal turbulence and future prospect of the firm.

Our study contributes to a very limited but growing literature on M&A and media coverage in a number of ways. First, unlike earlier studies we focus on the ex-ante media coverage on the firm and how it affects a manager's M&A decision. As M&A activities can cause significant shareholder wealth loss, it would be beneficial for the managers to pay attention to market feedback embedded in prevalent media coverage. This could save the firm from making a value destroying acquisition. Second, we find that media plays distinct roles of corporate governance. Our results show that it can discipline managers and can also influence behavioral aspects of managerial actions and decision-making process. Third, we show that it is important to consider the impact of newspaper and newswire items separately as they convey different signal to investors and market participants and play different governance roles. In general, our results provide more insights on the media's impact on M&As, which ranges from the very early stage of acquisition strategy formation to the consequence of acquisition in terms of long-term performance and managerial turnover.

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Table I. Media Sources

Table I shows the news media sources from which we collect the news information. We focus on the seven most circulated newspapers and the three largest newswires that cover U.S. firm news.

Newspapers	***Newswires***
The Wall Street Journal – Print and Online	Associated Press Newswires
The New York Times	Dow Jones News Service
The Chicago Sun-Times	Reuters News
The Globe and Mail – Print and Online	
The Washington Post – Print and Online	
USA Today	

Table II. Sample Descriptive Statistics

Panel A. Article Statistics (Includes articles 1 year prior to acquisition announcements)

Variables	Full Sample	Cases without Financial Targets
Total News Articles Analyzed	935,210.00	813,340.00
Average articles	80.95	84.51
Average newspaper articles	35.29	36.89
Average newswire articles	56.80	59.03

Panel B. Statistics on Negative Article Ratio and Negative Word ratio
(Includes articles 1 year prior to acquisition announcements)

We measure negative news coverage (*Negative Coverage*) using two methods: (i) by dividing the number of negative news articles by the total number of articles published about the acquiring firm in the 52 weeks before each acquisition announcement, and (ii) by dividing the number of negative words by the total number of words in all articles published about the acquiring firm in the 52 weeks before each acquisition announcement. For each category, again we create three variables: with all articles, newspaper articles and newswire articles. 'N' denotes the number of M&A deals that had media coverage in the past 52-weeks prior to the acquisition announcements.

Variable: **Negative Coverage (using Negative Article Ratio)**	N	Mean (% of neg. articles)
Negative coverage (all articles)	9624	55.6%
Negative coverage (newspaper)	7330	66.4%
Negative coverage (newswire)	9191	51.4%
Negative coverage (newspaper) – Negative coverage (newswire)		15.1%***
t-stat		(34.940)

Variable: **Negative Coverage (using Negative Word Ratio)**	N	Mean (neg. word ratio)
Negative coverage (all articles)	9624	0.014
Negative coverage (newspaper)	7330	0.016
Negative coverage (newswire)	9191	0.013
Negative coverage (newspaper) – Negative coverage (newswire)		0.003***
t-stat		(22.043)

Panel C. Descriptive Statistics of Dependent variables, Firm and Deal Characteristics

Panel C presents the descriptive statistics of dependent variables used in various regression models in the study, firm characteristics and deal characteristic. These statistics are based on our M&A sample; which include the cases only with an M&A event. We retain both completed and withdrawn cases. Detailed definitions of all control variables can be found in the Appendix A.

Dependent Variables	N	Mean	Median	Std. Dev.
Acquiring firm CAR (-2, +2)	10178	0.004	0.003	0.074
CEO Wealth Change	3415	0.030	0.002	0.709
CEO Turnover Ratio	11812	0.149	0.000	0.356
Acquirer long-term operating performance (3-yr ROA)	6482	-0.003	-0.002	0.211
Acquisition premium (CAR based)	2695	0.395	0.260	0.458

Firm Characteristics	N	Mean	Median	Std. Dev.
CEO overconfidence (media based) - ratio	10617	0.443	0.000	0.497
Excess cash (excess cash to assets net of cash ratio)	11812	0.022	0.022	0.112
Debt (LT debt to total asset ratio)	10361	0.483	0.479	0.227
Tobin's Q (Market value to book value ratio)	10383	2.676	1.849	3.241
Cash flow (Cash flow to total assets ratio)	10617	0.100	0.101	0.086
CEO ownership (%)	3529	4.579	1.450	7.949
Firm size (Total assets in million dollars)	10387	16837.68	1618.22	89840.41
Managerial quality (Earnings growth in decimal)	8998	0.070	0.000	0.945
G-index (range: 0 to 24)	8911	8.908	9.000	2.638

Deal Characteristics	N	Mean	Median	Std. Dev.
Private target	11812	0.357	0.000	0.479
Subsidiary target	11812	0.315	0.000	0.465
Pure cash payment	11812	0.366	0.000	0.482
Pure stock payment	11812	0.117	0.000	0.321
Related acquisitions (4-SIC)	11812	0.316	0.000	0.465
Transaction size (ratio)	10130	0.118	0.028	0.250
Tender offers	11812	0.061	0.000	0.239
Competing bids	11812	0.026	0.000	0.159
High tech acquisitions	11812	0.257	0.000	0.437
Majority control	11812	0.811	1.000	0.391

Table III. Economic Significance of the Media Impact on M&As

Table III shows the impact of negative news on the changes of the acquiring firm's market capitalization (i.e. *Dollar abnormal return*) upon the acquisition announcement. In following Moeller et al. (2004), we focus on the acquisitions where the deal value accounts for at least 1% of the acquiring firm's market cap. The panel shows the average deal value (in million dollars) and total deal value by each calendar year in the sample period. The *dollar abnormal return* is the product of the CAR (-1, +1) of the acquiring firm upon the acquisition announcement and its market cap on day -2 before the announcement. We report both the *dollar abnormal return* per deal and the *total dollar abnormal return* of the sample acquisition by each calendar year. All dollar values are adjusted to 2010 values using the annual inflation rate. Table III compares the dollar value impact of the acquisitions where the acquiring firm did not have any negative news articles in the year before the acquisition with the acquisitions where the acquiring firm had at least one negative news article published before the acquisition. It also aggregates the deal value and dollar abnormal return for two sub periods: 1991 to 2000 and 2001 to 2009.

	M&As without Negative Media Coverage (Mil. USD in 2010 value)					M&As with Negative Media Coverage (Mil. USD in 2010 value)				
Year	# of Deals	Average deal value	Total deal value	Average dollar abnormal return	Total dollar abnormal return	# of Deals	Average deal value	Total deal value	Average dollar abnormal return	Total dollar abnormal return
1991	33	70.63	2,330.66	6.13	202.44	91	281.32	25,600.27	-24.65	-2,243.32
1992	52	66.64	3,465.53	11.05	574.39	108	293.93	31,744.01	-24.52	-2,647.88
1993	63	76.67	4,830.09	-12.20	-768.75	141	181.45	25,584.30	1.81	255.16
1994	94	90.33	8,490.99	13.07	1,228.90	183	382.11	69,926.22	-48.41	-8,859.51
1995	93	94.36	8,775.89	-2.70	-251.16	223	622.95	138,917.47	7.16	1,595.81
1996	161	148.81	23,957.99	3.18	512.29	226	732.38	165,517.57	-6.67	-1,507.92
1997	174	180.21	31,356.08	11.05	1,921.96	310	712.47	220,865.38	-5.13	-1,590.10
1998	130	176.04	22,885.39	9.35	1,215.67	417	788.73	328,899.29	-22.56	-9,406.33
1999	87	1,199.94	104,394.57	-170.85	-14,864.12	440	1,525.28	671,124.72	-72.80	-32,031.72
2000	67	212.65	14,247.36	134.06	8,981.99	355	1,253.75	445,081.13	-677.96	-240,675.39
2001	68	150.15	10,210.28	-17.82	-1,211.45	294	1,219.63	358,570.92	-197.82	-58,158.42
2002	48	113.55	5,450.58	4.40	211.39	311	603.75	187,765.91	-55.87	-17,376.94
2003	51	82.01	4,182.63	1.91	97.38	330	517.37	170,731.26	-118.74	-39,183.48
2004	73	341.31	24,915.36	-7.88	-575.56	306	1,329.75	406,903.40	-33.94	-10,385.83
2005	70	239.13	16,738.75	-3.98	-278.57	308	1,317.35	405,742.81	-21.69	-6,680.78
2006	82	178.11	14,605.02	12.05	988.50	285	1,380.37	393,406.21	-87.36	-24,897.33
2007	46	142.18	6,540.48	-6.92	-318.47	299	861.49	257,586.68	30.47	9,111.85
2008	33	146.30	4,827.97	6.03	198.85	207	1,114.04	230,605.67	-164.05	-33,958.39
2009	8	87.56	700.45	15.74	125.91	123	1,099.98	135,297.04	-183.81	-22,608.20
1991-2000	954	235.57	224,734.56	-1.31	-1,246.37	2,494	851.35	2,123,260.37	-119.13	-297,111.19
2001-2009	479	184.07	88,171.52	-1.59	-762.04	2,463	1,033.95	2,546,609.89	-82.88	-204,137.51
Grand Total	1,433	218.36	312,906.07	-1.40	-2,008.41	4,957	942.08	4,669,870.26	-101.12	-501,248.70

Table IV. Impact of Negative Media Coverage on Acquiring Firm's Acquisitiveness

Table IV shows the fixed-effect panel data logistic regression results to test the impact of negative media coverage on an acquiring firm's acquisitiveness. The dependent variable is *acquisition probability*. It is a binary variable that equals 1 if the firm completed at least one merger and acquisition in a given year, otherwise it equals 0. We measure negative news coverage (*Negative media*) by dividing the number of negative news articles by the total number of articles published about the acquiring firm in the preceding calendar year. Control variables include *Firm size* (log of assets); *Tobin's Q* (the market value of assets over the book value of assets); *Cash flow* (earnings before extraordinary items plus depreciation, normalized by firm assets); *Debt* (percentage of long-term debt of the total assets); and *Past Acquisition Experience* (No. of acquisition made by the firm in past 5 years). Detailed definitions of all control variables can be found in the Appendix A. Model 1, 2, and 3 show the effect of all news articles, newspaper articles and newswire articles respectively. Standard errors are reported in the parentheses. ***, **, * stand for statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Dependent Variable: Acquisition probability

Variables	(1) Logit	(2) Logit	(3) Logit
Negative media (all articles)	-0.4317***		
	(0.057)		
Negative media (Newspaper)		-0.1457**	
		(0.062)	
Negative media (Newswire)			-0.4095***
			(0.055)
Firm size	0.0846***	0.1159***	0.0643***
	(0.020)	(0.024)	(0.022)
Tobin's Q	0.0992***	0.1298***	0.0962***
	(0.012)	(0.018)	(0.012)
Cash flow	2.1099***	2.2910***	2.0733***
	(0.283)	(0.375)	(0.293)
Debt	-0.2819*	-0.3821*	-0.2295
	(0.158)	(0.196)	(0.167)
Past Acquisition Experience	0.0947***	0.0932***	0.0839***
	(0.007)	(0.008)	(0.007)
Firm fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	24,093	15,711	21,701
Number of firms	1,615	1,333	1,571
Pseudo R^2	0.027	0.029	0.023

Table V. Impact of Negative Media Coverage on CEO Turnover

Table V shows the impact of negative news coverage on the disciplinary CEO turnover in the acquiring firms. The dependent variable, *CEO Turnover*, is a binary variable that equals 1 if the CEO left the acquiring firm in three years after the acquisition and equals 0 otherwise. We collect the CEO turnover information from the ExecuComp database. We do not include CEO turnovers that are based on retirement or illness in the sample. In Panel A, we measure negative news coverage (*Negative media*) by dividing the number of negative news articles by the total number of articles published about the acquiring firm in the preceding event year (i.e. over 52 weeks prior to the acquisition announcements). In Panel B we employ a similar measure but for the period over 52 weeks post effective date. Control variables include both acquisition deal characteristics and firm characteristics that are measured in the latest fiscal year end before the acquisition announcement. Appendix A presents all control variable descriptions. Model 1, 2, and 3 show the effect of all news articles, newspaper articles and newswire articles respectively. All three models include Fama-French industry fixed effects and year fixed effects. Robust standard errors are reported in the parentheses. ***, **, * stand for statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Panel A. Impact of Negative Media Coverage (Pre-announcement date) on CEO Turnover

Dependent Variable: CEO Turnover			
	(1)	(2)	(3)
	Logit	Logit	Logit
Negative media (all articles)	0.4598***		
	(0.177)		
Negative media (newspaper)		0.1205	
		(0.186)	
Negative media (newswire)			0.4399**
			(0.171)
Acquirer CAR (-2, +2)	0.5161	1.2175	0.5559
	(0.728)	(0.946)	(0.747)
CEO ownership	-0.0154*	-0.0066	-0.0123
	(0.009)	(0.010)	(0.009)
Price runup	0.1207	0.1013	0.1174
	(0.137)	(0.163)	(0.139)
CEO age	0.0067	0.0040	0.0061
	(0.007)	(0.008)	(0.007)
Private target	0.2872*	0.3936**	0.3114*
	(0.164)	(0.189)	(0.169)
Subsidiary target	0.2422	0.3887**	0.2562
	(0.170)	(0.195)	(0.176)
Related acquisition	-0.0182	0.0296	-0.0050
	(0.113)	(0.131)	(0.116)
Transaction size	0.3324	0.4379	0.4003
	(0.249)	(0.328)	(0.251)
Competing bid	-0.3388	-0.1709	-0.3417
	(0.476)	(0.489)	(0.474)
Tender offer	0.1307	0.3059	0.1783
	(0.289)	(0.316)	(0.294)
Pure stock payment	0.0155	-0.1300	-0.0016
	(0.172)	(0.209)	(0.178)
Majority control	0.3328	0.3582	0.4123*
	(0.223)	(0.241)	(0.234)
Firm size	0.1181***	0.0976**	0.1060**

	(0.044)	(0.048)	(0.044)
Tobin's Q	-0.0035	-0.0070	-0.0026
	(0.015)	(0.017)	(0.015)
Debt	-1.3861***	-1.3335***	-1.4318***
	(0.329)	(0.359)	(0.340)
High tech acquisitions	0.2814	0.4652**	0.2105
	(0.191)	(0.225)	(0.197)
Constant	-5.1190***	-4.6271***	-5.0070***
	(0.749)	(0.864)	(0.758)
Industry fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	2,389	1,666	2,285
Pseudo R2	0.058	0.060	0.065

Panel B. Impact of Negative Media Coverage (Post-effective date) on CEO Turnover

Dependent Variable: CEO Turnover			
	(1)	(2)	(3)
	Logit	Logit	Logit
Negative media (all articles)$_{\text{post eff}}$	0.5683***		
	(0.185)		
Negative media (newspaper)$_{\text{post eff}}$		0.6305***	
		(0.202)	
Negative media (newswire)$_{\text{post eff}}$			0.4631***
			(0.174)
Acquirer CAR (-2, +2)	0.4953	-0.0900	0.3738
	(0.702)	(0.867)	(0.707)
CEO ownership	-0.0120	-0.0101	-0.0102
	(0.008)	(0.009)	(0.008)
Price runup	0.2067	0.0215	0.2278
	(0.138)	(0.158)	(0.140)
CEO age	0.0038	-0.0030	0.0032
	(0.006)	(0.007)	(0.006)
Private target	0.2357	0.3833**	0.2499
	(0.161)	(0.183)	(0.164)
Subsidiary target	0.1759	0.2947	0.2151
	(0.169)	(0.190)	(0.172)
Related acquisition	0.0280	0.0059	0.0401
	(0.111)	(0.129)	(0.113)
Transaction size	0.2498	0.2754	0.2804
	(0.243)	(0.289)	(0.242)
Competing bid	-0.0811	-0.1544	-0.0696
	(0.424)	(0.492)	(0.424)
Tender offer	0.1075	0.1117	0.1270
	(0.279)	(0.316)	(0.280)
Pure stock payment	-0.0279	-0.1124	-0.0607
	(0.169)	(0.200)	(0.172)
Majority control	0.3675	0.3012	0.4188*
	(0.225)	(0.240)	(0.234)
Firm size	0.0916**	0.0700	0.0799*
	(0.043)	(0.049)	(0.044)
Tobin's Q	-0.0132	-0.0076	-0.0136
	(0.015)	(0.016)	(0.015)

Debt	-1.3400***	-1.6076***	-1.3680***
	(0.326)	(0.376)	(0.331)
High tech acquisitions	0.3648*	0.5294**	0.2855
	(0.191)	(0.224)	(0.192)
Constant	-4.8646***	-4.0551***	-4.7265***
	(0.733)	(0.849)	(0.737)
Industry fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	2,429	1,743	2,355
Pseudo R2	0.061	0.062	0.062

Table VI. Impact of Negative Media Coverage on CEO Wealth Change

Panel A. Impact on CEO Wealth Change

In Table VI Panel A, we test the impact of negative media coverage on acquirer CEO's wealth change. We use 'CEO ownership × CAR' as a measure of *CEO Wealth Change*. We measure negative news coverage (*Negative media*) by dividing the number of negative news articles by the total number of articles published about the acquiring firm in the preceding event year (i.e. over 52 weeks prior to the acquisition announcements). Control variables include both acquisition deal characteristics and firm characteristics that are measured in the latest fiscal year end before the acquisition announcement. Appendix A presents all control variable descriptions. Model 1, 2, and 3 show the effect of all news articles, newspaper articles and newswire articles respectively. All three models include Fama-French industry fixed effects and year fixed effects. Robust standard errors are reported in the parentheses. ***, **, * stand for statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Dependent Variable: CEO Wealth Change			
	(1) OLS	(2) OLS	(3) OLS
Negative media (all articles)	0.0439		
	(0.066)		
Negative media (newspaper)		0.0436	
		(0.055)	
Negative media (newswire)			0.0236
			(0.064)
Private target	0.1042*	0.1222**	0.1078*
	(0.054)	(0.054)	(0.056)
Subsidiary target	0.1023*	0.1342**	0.1077*
	(0.058)	(0.060)	(0.059)
Related acquisition	0.0512	0.0689	0.0449
	(0.041)	(0.047)	(0.042)
Transaction size	-0.0765	-0.0841	-0.0740
	(0.092)	(0.143)	(0.095)
Competing bid	-0.0106	0.0070	-0.0066
	(0.104)	(0.128)	(0.105)
Tender offer	0.0351	0.0357	0.0131
	(0.074)	(0.084)	(0.069)
Pure stock payment	0.0041	-0.0140	0.0089
	(0.070)	(0.067)	(0.073)
Majority control	0.0354	-0.0273	0.0311
	(0.069)	(0.069)	(0.071)
Firm size	-0.0111	-0.0027	-0.0115
	(0.015)	(0.018)	(0.015)
Tobin's Q	0.0031	0.0062*	0.0028
	(0.004)	(0.004)	(0.004)
Debt	0.1343	0.0598	0.1415
	(0.123)	(0.101)	(0.127)
High tech acquisitions	-0.0386	-0.0147	-0.0422
	(0.042)	(0.047)	(0.042)
Constant	0.0328	-0.2257	-0.1768
	(0.193)	(0.202)	(0.189)
Industry fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	1,527	1,116	1,465
R-squared	0.041	0.049	0.041
Adj. R-squared	0.016	0.015	0.015

Panel B. Impact of CEO ownership on acquisition probability

Table VI Panel B shows the fixed-effect panel data logistic regression results to test the impact of negative media coverage on an acquiring firm's acquisitiveness after controlling for CEO ownership. The dependent variable is *acquisition probability*. It is a binary variable that equals 1 if the firm completed at least one merger and acquisition in a given year, otherwise it equals 0. We measure negative news coverage (*Negative media*) by dividing the number of negative news articles by the total number of articles published about the acquiring firm in the preceding calendar year. Detailed definitions of all control variables can be found in the Appendix A. Model 1, 2, and 3 show the effect of all news articles, newspaper articles and newswire articles respectively. Standard errors are reported in the parentheses. ***, **, * stand for statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Dependent Variable: Acquisition Probability

	(1) Logit	(2) Logit	(3) Logit	(4) Logit	(5) Logit	(6) Logit
Negative media (all articles)	-0.3984***	-0.4047***				
	(0.104)	(0.120)				
Negative media (Newspaper)			-0.1947*	-0.2816**		
			(0.117)	(0.140)		
Negative media (Newswire)					-0.3622***	-0.3694***
					(0.101)	(0.117)
Firm size	-0.1820***	-0.1821***	-0.2308***	-0.2331***	-0.1864***	-0.1866***
	(0.058)	(0.058)	(0.075)	(0.075)	(0.061)	(0.061)
Tobin's Q	0.0721***	0.0722***	0.0781***	0.0778***	0.0738***	0.0739***
	(0.019)	(0.019)	(0.026)	(0.026)	(0.019)	(0.019)
Cash flow	2.1455***	2.1454***	1.8587***	1.8487***	1.9630***	1.9640***
	(0.552)	(0.552)	(0.686)	(0.684)	(0.560)	(0.560)
Debt	0.0706	0.0706	-0.1709	-0.1697	0.0139	0.0142
	(0.392)	(0.392)	(0.477)	(0.477)	(0.401)	(0.400)
Past Acquisition Experience	0.0064	0.0064	0.0172	0.0169	0.0102	0.0102
	(0.015)	(0.015)	(0.018)	(0.018)	(0.015)	(0.015)
CEO ownership	-0.0157**	-0.0165	-0.0204**	-0.0322**	-0.0089	-0.0098
	(0.008)	(0.011)	(0.009)	(0.014)	(0.008)	(0.011)
Negative media (all articles) × CEO Ownership		0.0014				
		(0.013)				
Negative media (Newspaper) × CEO ownership				0.0180		
				(0.016)		
Negative media (Newswire) × CEO ownership						0.0016
						(0.013)
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,078	6,078	3,424	3,424	5,666	5,666
Number of firms	853	853	595	595	825	825
Pseudo R^2	0.017	0.017	0.017	0.017	0.017	0.017

Table VII. Impact of Negative Media Coverage on Acquisition Premium

In Table VII, we test the impact of negative media coverage on the acquisition premium. The *acquisition premium* is measured by the cumulative abnormal returns of the target firm from day -63 to +126 around the acquisition announcements. We measure negative news coverage (*Negative media*) by dividing the number of negative news articles by the total number of articles published about the acquiring firm in the preceding event year (i.e. over 52 weeks prior to the acquisition announcements). Control variables include both acquisition deal characteristics and firm characteristics that are measured in the latest fiscal year end before the acquisition announcement. Detailed definitions of each control variables can be found in the Appendix A. Model 1, 2, and 3 show the effect of all news articles, newspaper articles and newswire articles respectively. All three models include Fama-French industry fixed effects and year fixed effects. Robust standard errors are reported in the parentheses. ***, **, * stand for statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Dependent Variable: Acquisition Premium			
	(1) OLS	(2) OLS	(3) OLS
Negative media (all articles)	0.1329**		
	(0.057)		
Negative media (newspaper)		0.0166	
		(0.057)	
Negative media (newswire)			0.1163**
			(0.051)
Related acquisition	0.0074	0.0050	0.0134
	(0.029)	(0.032)	(0.029)
Transaction size	-0.1448***	-0.1422***	-0.1526***
	(0.035)	(0.044)	(0.035)
Competing bid	0.0344	0.0182	0.0326
	(0.052)	(0.058)	(0.053)
Tender offer	0.0718**	0.0812**	0.0737**
	(0.033)	(0.037)	(0.034)
Pure stock payment	0.0034	-0.0069	-0.0058
	(0.035)	(0.038)	(0.035)
Majority control	0.0649	0.0495	0.0798*
	(0.044)	(0.047)	(0.044)
Firm size	-0.0425***	-0.0455***	-0.0386***
	(0.010)	(0.011)	(0.010)
Tobin's Q	-0.0069	-0.0062	-0.0057
	(0.005)	(0.006)	(0.005)
Debt	0.0398	0.0049	0.0579
	(0.070)	(0.080)	(0.072)
High tech acquisitions	0.0432	0.0435	0.0433
	(0.045)	(0.047)	(0.046)
Constant	0.7361***	0.8379***	0.6826***
	(0.123)	(0.131)	(0.126)
Industry fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	1,434	1,208	1,391
R-squared	0.088	0.093	0.085
Adj. R-squared	0.062	0.062	0.058

Table VIII. Impact of Negative Media Coverage on Acquiring Firm's CAR

Table VIII tests the impact of negative news coverage on the announcement returns of the acquiring firms upon the mergers and acquisitions announcements. The dependent variable is the acquiring firm's CAR (-2, +2) estimated based on a market model using the CRSP value weighted index. We measure negative news coverage (*Negative media*) by dividing the number of negative news articles by the total number of articles published about the acquiring firm in the preceding event year (i.e. over 52 weeks prior to the acquisition announcements). Control variables include both acquisition deal characteristics and firm characteristics that are measured in the latest fiscal year end before the acquisition announcement. Detailed definitions of each control variables can be found in the Appendix A. Model 1, 2, and 3 show the effect of all news articles, newspaper articles and newswire articles respectively. All three models include Fama-French industry fixed effects and year fixed effects. Robust standard errors are reported in the parentheses. ***, **, * stand for statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Dependent Variable: Acquirer CAR(-2, +2)			
	(1)	(2)	(3)
	OLS	OLS	OLS
Negative media (all articles)	-0.0046		
	(0.005)		
Negative media (newspaper)		-0.0098**	
		(0.005)	
Negative media (newswire)			-0.0013
			(0.005)
Private target	0.0190***	0.0139***	0.0183***
	(0.003)	(0.003)	(0.003)
Subsidiary target	0.0218***	0.0166***	0.0216***
	(0.003)	(0.003)	(0.003)
Related acquisition	0.0003	-0.0019	0.0000
	(0.002)	(0.003)	(0.002)
Transaction size	-0.0189***	-0.0192**	-0.0225***
	(0.006)	(0.008)	(0.006)
Competing bid	-0.0001	0.0006	0.0007
	(0.005)	(0.006)	(0.005)
Tender offer	0.0113***	0.0090**	0.0108***
	(0.004)	(0.004)	(0.003)
Pure stock payment	-0.0147***	-0.0147***	-0.0142***
	(0.004)	(0.004)	(0.004)
Majority control	-0.0005	-0.0026	-0.0002
	(0.003)	(0.003)	(0.003)
Firm size	-0.0049***	-0.0050***	-0.0050***
	(0.001)	(0.001)	(0.001)
Tobin's Q	-0.0003	-0.0002	-0.0004
	(0.000)	(0.001)	(0.000)
Debt	0.0264***	0.0254***	0.0270***
	(0.007)	(0.007)	(0.008)
High tech acquisitions	0.0007	-0.0020	0.0012
	(0.004)	(0.004)	(0.004)
Constant	0.0229**	0.0315***	0.0239**
	(0.010)	(0.011)	(0.010)
Industry fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	4,906	3,953	4,756
R-squared	0.057	0.059	0.058
Adj. R-squared	0.049	0.048	0.050

Table IX. Impact of Negative Media Coverage on Acquirer Long-term Performance

Table IX tests the impact of negative news coverage on the long-term operating performance of the acquiring firms. The *long-term operating performance* (DID_ROA_i) measures the changes in the acquiring firm's matching-firm adjusted ROA in the three years after the acquisition compared with the matching-firm adjusted ROA in the three years before the acquisition. The matching sample is created based on the propensity score matching method (Rosenbaum and Rubin, 1983). We control for negative news coverage prior to the acquisition, firm size, Tobin's Q, and financial leverage (Debt) in the propensity score matching model. We look for matching firms that did not make an acquisition in the performance measurement period. We use one-to-one matching based on the closest propensity score by year. We calculate a difference-in-difference measure: $DID\_ROA_i = (ROA_{i,t+3} - ROA_{c,t+3}) - (ROA_{m,t-3} - ROA_{m,t-3})$, where $ROA_{i,t+3}$ is the average ROA for acquiring firm *i* in the three years after the acquisition, $ROA_{i,t-3}$ is the average ROA for the acquiring firm *i* in the three years before the acquisition. Accordingly, $ROA_{m,t+3}$ is the average ROA for the matching firm *m* in the three years after the acquisition, $ROA_{m,t-3}$ is the average ROA for the matching firm *m* in the three years before the acquisition. We then use the DID_ROA_i measure in the regression model and test the impact of negative media coverage impact on the long-term operating performance of the acquiring firm.

We measure negative news coverage (*Negative media*) by dividing the number of negative news articles by the total number of articles published about the acquiring firm in the preceding event year (i.e. over 52 weeks prior to the acquisition announcements). Control variables include both acquisition deal characteristics and firm characteristics that are measured in the latest fiscal year end before the acquisition announcement. Detailed definitions of each control variables can be found in the Appendix A. Model 1, 2, and 3 consider all target firms; whereas Model 4, 5, and 6 consider only public target firms. Model 1 and 4 show the effect of all news articles, Model 2 and 5 show the effect of newspaper articles and Model 3 and 6 show the effect of newswire articles. All six models include Fama-French industry fixed effects and year fixed effects. Robust standard errors are reported in the parentheses. ***, **, * stand for statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Dependent Variable: Acquirer Long-term Performance

	All Targets			Public Targets Only		
	(1) OLS	(2) OLS	(3) OLS	(4) OLS	(5) OLS	(6) OLS
Negative media (all articles)	-0.0194*			-0.0796**		
	(0.011)			(0.033)		
Negative media (newspaper)		-0.0049			-0.0404*	
		(0.010)			(0.023)	
Negative media (newswire)			-0.0238**			-0.0620**
			(0.010)			(0.025)
Private target	0.0025	0.0065	0.0014			
	(0.009)	(0.010)	(0.009)			
Subsidiary target	0.0228***	0.0248***	0.0214**			
	(0.009)	(0.009)	(0.009)			
Related acquisition	-0.0061	-0.0080	-0.0057	-0.0258*	-0.0319**	-0.0242*
	(0.006)	(0.007)	(0.007)	(0.014)	(0.015)	(0.014)
Transaction size	0.0053	-0.0141	0.0034	-0.0127	-0.0563***	-0.0198
	(0.014)	(0.013)	(0.015)	(0.025)	(0.020)	(0.025)
Competing bid	-0.0324*	-0.0246	-0.0320*	-0.0163	-0.0005	-0.0169
	(0.018)	(0.019)	(0.018)	(0.018)	(0.019)	(0.018)
Tender offer	0.0068	0.0113	0.0083	-0.0081	-0.0033	-0.0058
	(0.012)	(0.012)	(0.012)	(0.013)	(0.013)	(0.013)
Pure stock payment	0.0127	0.0178*	0.0146*	-0.0045	0.0012	0.0020
	(0.009)	(0.010)	(0.009)	(0.015)	(0.016)	(0.014)

Majority control	-0.0052	-0.0023	-0.0046	0.0048	0.0048	0.0025
	(0.009)	(0.010)	(0.009)	(0.013)	(0.014)	(0.013)
Firm size	-0.0062***	-0.0085***	-0.0073***	-0.0056	-0.0093	-0.0096**
	(0.002)	(0.003)	(0.002)	(0.005)	(0.006)	(0.004)
Tobin's Q	-0.0073***	-0.0076***	-0.0075***	-0.0167***	-0.0183***	-0.0177***
	(0.001)	(0.002)	(0.001)	(0.006)	(0.007)	(0.006)
Debt	0.0108	0.0089	0.0074	-0.0308	-0.0128	-0.0367
	(0.017)	(0.018)	(0.018)	(0.033)	(0.036)	(0.034)
High tech acquisitions	0.0197*	0.0202	0.0188	0.0308	0.0361	0.0246
	(0.011)	(0.013)	(0.011)	(0.022)	(0.024)	(0.022)
Constant	0.0628***	0.0767***	0.0736***	0.1572***	0.1681***	0.1918***
	(0.024)	(0.027)	(0.025)	(0.052)	(0.056)	(0.052)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,807	4,722	5,519	1,655	1,468	1,603
R-squared	0.044	0.052	0.049	0.089	0.104	0.104
Adj. R-squared	0.038	0.044	0.042	0.068	0.081	0.082

Table X. Addressing Omitted Variable Bias Issue

Table X shows the fixed-effect panel data logistic regression results to test the issue of omitted variable bias. The dependent variable is *acquisition probability*. It is a binary variable that equals 1 if the firm completed at least one merger and acquisition in a given year, otherwise it equals 0. We measure negative news coverage (*Negative media*) by dividing the number of negative news articles by the total number of articles published about the acquiring firm in the preceding calendar year. We include three additional control variables (compared to Table IV) in the regression models: *CEO overconfidence (Media based),* which measures the extent of CEO overconfidence (Malmendier and Tate, 2008); Managerial quality, proxied by past earnings growth (Masulis et al. 2007); and *Media attention*, proxied by number of articles published in the media (Liu and McConnell, 2013). Other control variables include *Firm size* (log of assets); *Tobin's Q* (the market value of assets over the book value of assets); *Cash flow* (earnings before extraordinary items plus depreciation, normalized by firm assets); *Debt* (percentage of long-term debt of the total assets); and *Past Acquisition Experience* (No. of acquisition made by the firm in past 5 years). Detailed definitions of all control variables can be found in the Appendix A. Model 1, 2, and 3 show the effect of all news articles, newspaper articles and newswire articles respectively. Standard errors are reported in the parentheses. ***, **, * stand for statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Dependent Variable: Acquisition Probability

	(1) Logit	(2) Logit	(3) Logit
Negative media (all articles)	-0.3925***		
	(0.065)		
Negative media (Newspaper)		-0.1557**	
		(0.070)	
Negative media (Newswire)			-0.3572***
			(0.062)
Firm size	0.0164	0.0154	-0.0108
	(0.028)	(0.033)	(0.030)
Tobin's Q	0.0906***	0.0993***	0.0867***
	(0.016)	(0.022)	(0.017)
Cash flow	3.1819***	3.7468***	3.0846***
	(0.486)	(0.599)	(0.501)
Debt	-0.3176	-0.5470**	-0.3430
	(0.210)	(0.252)	(0.218)
Past Acquisition Experience	0.0908***	0.0953***	0.0876***
	(0.008)	(0.009)	(0.008)
CEO overconfidence (media based)	0.1014**	0.1475***	0.0861*
	(0.044)	(0.053)	(0.045)
Managerial quality	-0.0296	-0.0458**	-0.0293
	(0.018)	(0.022)	(0.019)
Media attention (all articles)	0.0004*		
	(0.000)		
Media attention (newspaper)		0.0011*	
		(0.001)	
Media attention (newswire)			0.0006*
			(0.000)
Firm fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	18,938	12,650	17,457
Number of firms	1,444	1,186	1,404
Pseudo R^2	0.022	0.025	0.020

Appendix A:

List of Variables and Measurement

Dependent variables

Acquisition probability	It is a dummy variable that equals 1 if the firm made any acquisitions in the year, otherwise it equals zero.
Acquirer CAR (M&A announcement return)	It is measured by the acquiring firm's cumulative abnormal return (CAR) over a 3-day (-1, +2) or 5-day (-2, +2) period.
Acquirer long-term operating performance	It is measured by the acquiring firm's 3-year industry adjusted ROA after the acquisition compared to the 3-year ROA before the acquisition.
Acquisition premium	It is measured by the cumulative abnormal returns of the target firm stock between day -63 and day +126; alternatively, it is measured by the difference between M&A offer price and the target firm stock price in a 4-week period before the M&A announcement as defined by the SDC database.
CEO wealth change	It is the product of acquirer CAR and CEO ownership (i.e. CAR × CEO ownership). Where, CEO ownership is the percentage of shares owned by the CEO (including the exercisable options)
CEO turnover	It is a binary variable that equals 1 if the CEO left the acquiring firm in the three years after the acquisition and equals 0 otherwise. We collect the CEO turnover information from the ExecuComp database. We do not include CEO turnovers that are the result of retirement or illness in the sample.

Independent variables

Negative media (all articles)	Percentage of negative news articles out of total articles in the firm-year (or in the event year before the M&A announcements). In order to determine the tone (i.e. negative or positive news article) we compare the number of negative and positive words in an article. If the number of negative words is more than the number of positive words, it is categorized as a negative toned article. The variable is measured for three media sources: newspaper and newswire combined, newspaper only, and newswire only.
Negative media(Newspaper)	It is a similar measure as *Negative media (all articles)* but considers only newspaper articles.
Negative media (Newswire)	It is a similar measure as *Negative media (all articles)* but considers only newswire articles.

Control variables: CEO and media related

CEO overconfidence (media based)	We follow Malmendier and Tate (2008) in order to construct the CEO overconfidence variable (*overconfident_CEO*). First, we categorize an article as an article indicating CEO overconfidence, when the number of "confident," "confidence," "optimistic," and "optimism" mentions for a CEO in the news article searches exceeds the number of "not confident," "not optimistic," and "reliable, cautious, practical, conservative, steady, frugal" mentions between the acquisition announcement date and the previous year. In order to obtain the *CEO overconfidence (media based)* variable we track all articles in the sample years up to the first acquisition made by the CEO and assign a value of 1 if the number of "overconfidence" mentions is larger than the "conservative" mentions of the CEO (Malmendier and Tate, 2008).
CEO overconfidence (Holder 67)	We use the CEO option information to construct an alternative measure of an overconfident CEO. We follow Malmendier and Tate (2008) to define CEOs as optimistic if the CEOs hold stock options that are more than 67% in the money (i.e., the stock price exceeds the exercise price by more than 67%). Since we do not have the same level of detailed data that Malmendier and Tate use, we follow Campbell et al. (2011, page. 11) to compute the option moneyness. The *CEO overconfidence (Holder 67)* variable is a dummy variable that equals 1 if the firm CEO has more than 67% in-the-money stock options, and otherwise it equals 0.
CEO ownership	Percentage of shares owned by the CEO (including the exercisable options).
Managerial quality (earnings growth)	Industry-adjusted operating income growth over the 3 years prior to the acquisition announcement (Morck, Shleifer, and Vishny, 1990; Masulis, Wang and Xie, 2007).
Media Attention	The number of articles that mention the firm name in all sample years up to the year-end before the acquisition date (Malmendier and Tate, 2008; Liu and McConnell, 2013).

Control variables: Deal characteristics

Private target	It is a dummy variable that equals 1 if the target firm is private, otherwise it equals 0.
Subsidiary target	It is a dummy variable that equals 1 if the target firm is a subsidiary firm, otherwise it equals 0.
Public target	It is a dummy variable that equals 1 if the target firm is public, otherwise it equals 0.
Related acquisition	It is a dummy variable that equals 1 if it is a related acquisition (based on 4 sic code of the acquiring and target industry), otherwise it equals 0.
Transaction size	M&A transaction value divided by the acquiring firm's market cap.
Competing bid	It is a dummy variable that equals 1 if there is any competing bidder, otherwise it equals 0.
Tender offer	It is a dummy variable that equals 1 for a tender offer, otherwise it equals 0.
Majority control	It is a dummy variable that equals 1 for majority control acquisitions (larger than 50%

	ownership in the target firm), otherwise it equals 0.
Pure cash payment	It is a dummy variable that equals 1 if the payment is made by 100% cash, otherwise it equals 0.
Pure stock payment	It is a dummy variable that equals 1 if the payment is made by 100% stock, otherwise it equals 0.
High tech acquisitions	It is a dummy variable that equals 1 if the acquiring firm and the target firm are both in the high-tech industry (SIC codes: 3571, 3572, 3575, 3577, 3578 (computer hardware), 3661, 3663, 3669 (communications equipment), 3671, 3672, 3674, 3675, 3677, 3678, 3679 (electronics), 3812 (navigation equipment), 3823, 3825, 3826, 3827, 3829 (measuring and controlling devices), 3841, 3845 (medical instruments), 4812, 4813 (telephone equipment), 4899 (communications services), and 7371, 7372, 7373, 7374, 7375, 7378, and 7379 (software). (Loughran and Ritter, 2004, page.35)
Past acquisition experience	Number of M&As undertaken by the acquiring firm in the five years prior to the current acquisition.

Control variables: Firm characteristics (acquiring firm)

Firm size	The acquiring firm's total assets (log transformed) in the fiscal year end before the acquisition.
Tobin's Q	The acquiring firm's Tobin's Q in the fiscal year end before the acquisition. It denotes market value of assets over book value of assets (Masulis et al., 2007).
Debt	The acquiring firm's long term debt to assets ratio in the fiscal year end before the acquisition.
Cash flow	It is measured by earnings before extraordinary items plus depreciation and then normalized by the total assets value of the company in the fiscal year end before the acquisition.
Excess cash	It is the residual cash value variable obtained from the cash holding regression model suggested by Dittmar and Mahrt-Smith (2007). It is expressed as excess cash to assets net of cash ratio.