ANALYSTS' ROLE IN M&A ANNOUNCEMENTS: THE MODERATING EFFECT OF ANALYST SCRUTINY AT THE EVENT-LEVEL

by

Eunjoo Yi

B.A., Korea University, 2003

M.S., Korea University, 2007

M.S., University of Illinois at Urbana-Champaign, 2009

Submitted to the Graduate Faculty of

The Joseph M. Katz Graduate School of Business in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy

University of Pittsburgh

2016

UNIVERSITY OF PITTSBURGH

JOSEPH M. KATZ GRADUATE SCHOOL OF BUSINESS

This dissertation was presented

by

Eunjoo Yi

It was defended on

June 1, 2015

and approved by

Gerry McNamara, Professor of Management
Eli Broad College of Business, Michigan State University

John Prescott, Thomas O'Brien Chair of Strategy
Katz Graduate School of Business, University of Pittsburgh

Susan K. Cohen, Associate Professor of Business Administration
Katz Graduate School of Business, University of Pittsburgh

Feifei Ye, Assistant Professor of Research Methodology
Department of Psychology in Education, University of Pittsburgh

Dissertation Advisor: Ravindranath Madhavan, Professor of Business Administration
Katz Graduate School of Business, University of Pittsburgh

ANALYSTS' ROLE IN M&A ANNOUNCEMENTS:
THE MODERATING EFFECT OF ANALYST SCRUTINY AT THE EVENT-LEVEL

Eunjoo Yi, PhD

University of Pittsburgh, 2016

Although much is known regarding the antecedents and consequences of analyst scrutiny, very little attention has been paid to how analyst scrutiny is stimulated in a firm's announcement and subsequently influences the market response to the announcement. Adopting a behavioral perspective of analyst scrutiny in M&A context, I examine how analyst scrutiny moderates the effects of deal attributes on the market response to deal announcements. To test this moderating effect on M&A performance, I decompose analyst scrutiny into two levels: the firm-level and the event-level, and suggest that event-level scrutiny occurs based on specific event attributes. Treating deal-level scrutiny as event-level scrutiny triggered by a firm's rich media use for an M&A announcement, I propose that deal-level scrutiny will magnify the effects of both value-positive and value-negative deal attributes on an acquirer's market performance. A dataset of 783 M&A announcements by S&P 500 companies from 2005 to 2011 supported the moderating effect of rich media use only on the relationship between a negative deal attribute, such as relative deal size, and an acquirer's performance, but not on the relationship between two positive attributes, cash payment for a deal and industry relatedness, and performance.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGMENTS

It was a long journey, much longer than I expected. I met many challenges and obstacles during this journey. Without a lot of help and supports from my family, colleagues, and mentors, I could have never accomplished this PhD program. Now, at the end of this journey, I wish to acknowledge their contributions.

To start with, my advisor, Dr. Madhavan, whose towering intellect and incisive comments have stimulated my intellectual curiosity and enriched my research. He taught me not only how to develop research ideas, but also how to keep my passion for new knowledge and live as a scholar. Also, I would like to thank my committee members – John Prescott, Susan K. Cohen, Gerry McNamara, and Feifei Ye for their insightful feedback, which significantly improved the quality of my dissertation.

My family deserves much appreciation for their selfless love and unconditional support. My parents selflessly listened to the daily ups and downs of my graduate school career and their care packages from home were always welcome gifts and the best solution to reduce homesickness. My sister, Eunyoung, brother, Eunki, and brother-in-law, Dongho, were there on the phone in a pinch to provide emotional support and healing. In the tough PhD student life, it was always a great pleasure to meet with my wonderful nieces, Inseo, Yoonseo, and Yeonseo.

Finally, I owe great thanks to Junghwan Kim, whom I met in Pittsburgh and got married to in 2014. He changed my PhD program and my life by enabling me to have a cheerful view and positive attitudes in life. Without him, I could not have had this warm-hearted and supportive family-in-law. Without him, I could not have met the world's loveliest boy, my son. Ryan, my greatest creation is you. This is not just from Iron Man 2 (2010), but from the bottom of my heart. You always teach me what is the most valuable and precious in my life.

I just finished one chapter in my life. I do not know what the next journey will look like. But I know it will be full of joy and happiness with these people.

May 2016

Florence, SC

I. INTRODUCTION

Mergers and Acquisitions (M&A) are strategically important moves as well as constantly compelling research topics in various academic disciplines (Haleblian, Denvers, McNamara, Carpenter, & Davison, 2009). Finance scholars have paid attention to shareholder wealth creation and reduction, and strategic and behavioral literature has highlighted strategic fit, organizational fit, and the acquisition process in an effort to explain M&A performance (Cartwright & Schoenberg, 2006). This proliferation of M&A studies has contributed to identification of the various factors related to M&A, such as antecedents of M&A, moderators of the M&A process, and its performance. However, there is still significant unexplained variance remaining in existing M&A performance studies (King, Dalton, Daily, & Covin, 2004). I propose that a behavioral perspective of managers' announcements and consequent analyst scrutiny can account for at least some of this unexplained variance. Recently a growing body of research in behavioral finance, strategic management, and economic sociology has begun to criticize the efficient-markets hypothesis and bring the assumption of investor rationality into question. In line with this criticism, I further suggest that market response to M&A announcements could be better understood through the behavioral mechanisms underlying investors' decision making. Assuming these investors' perceptions of acquisitions are influenced by both managers' announcements and analysts' recommendations, this study especially focuses on analysts' scrutiny occurring in a firm's announcement. Although it is well known that the

analyst serves as an information intermediary and an external monitor, thus potentially affecting investors' and firm managers' decision making (Zuckerman, 1999, 2000; Benner, 2010; Benner & Ranganathan, 2012), we do not yet understand how analysts' behavior, especially scrutiny, influences the impacts of a firm's announcements on market responses. As one facet of analyst influence, I propose that analyst scrutiny at the event level moderates the effects of event attributes on the stock market reaction to a firm's announcement.

Scrutiny as ongoing and intense attention to the objects and close monitoring accompanied by frequent questions and interruptions (Sutton & Galunic, 1996) occurs when the target scrutinized has high visibility or uncertainty (e.g., Meznar & Nigh, 1995; Pfeffer, 1973; Wang, Choi, & Li, 2008; Langberg & Sivaramakrishnan, 2010). The greater benefits from information acquisition than the acquisition cost also attract analyst scrutiny (c.f. Lang, Lins, & Miller, 2004). When a firm announces events characterized by a high level of uncertainty and the possibility of agency problems, analysts tend to closely examine managers' behaviors and intensely question them in order to make better forecasts of the event performance. Even though the analyst's fierce scrutiny may cause managers to suffer from cognitive overload and negative affect due to the close monitoring, frequent interruptions and questioning, shareholders receive the benefits of the scrutiny, such as a reduction in the agency problem or a decrease in information asymmetry between managers and shareholders (Gentry & Shen, 2013; Fama & Jensen, 1983).

Existing literature on analyst scrutiny has considered it as a firm-level factorthat influences managers' behaviors and firms' strategic decisions (e.g., Gentry & Shen, 2013; Rao & Sivakumar, 1999; Zuckerman, 2000; Benson, Brau, Cicon, & Ferris, 2015). In the literature, authors indicate that the analysts' high scrutiny on an overall firm influences its strategic

decisions, such as R&D investments, de-diversification and the establishment of investor relations departments. However, I suggest that analyst scrutiny occurs not only at the broader firm level, but also, more granularly, at the event level. For example, a given firm may receive greater scrutiny when it announces one event and less scrutiny when it announces another event; focusing only on firm-level scrutiny ignores this potential impact of the scrutiny induced by certain event types and attributes. Analyst scrutiny at the firm level may influence managers' behaviors. For instance, it would be hard for managers facing intense scrutiny to act against shareholders' interest or to withhold important information. While analyst scrutiny at the firm level is viewed as the scrutiny which the firm usually experiences regardless of any specific event or issue, analyst scrutiny at the event level can be generated from specific event-level attributes, for example, event contents, the recent performance of an announcing firm, or modes of an event announcement (e.g., Mayew & Venkatachalam, 2012).

This research focuses on the moderating role of analyst scrutiny in M&A announcements since M&A is fundamentally characterized by a high level of uncertainty and ambiguity, and the possibility of agency problems and information asymmetry. M&A is also highly visible due to its uncommonness and significance. Specifically, I propose that the use of rich media for M&A announcements, such as conference calls and webcasts, triggers greater analyst scrutiny. When M&A deals are announced via rich media, analysts could inquire into all doubtful or unexplained points by directly asking managers during Q&A sessions. Compared to lean media, such as 8K filings or press releases, a manager's rich media choice for the announcement has been known to be advantageous to both managers and other market participants: long-term reductions in information asymmetry, a decrease in dispersion among analysts' opinions, lower costs of capital, and favorable market reactions to announcements (Brown, Hillegeist, & Lo, 2004;

Bowen, Davis, & Matsumoto, 2002; Kimbrough & Louis, 2011). While these many advantages of rich media have been highlighted in the existing literature, few studies have focused on possible disadvantages. Especially when an acquirer or a deal has negative attributes, such as stock payment for the target company or acquisition of a large target, how analyst scrutiny via rich media might occur and influence the investors' decision making about the deal has not yet been examined. This study assumes that transparency in information disclosure enhanced by high analyst scrutiny would reveal all aspects of the deal and help investors and analysts to better understand and assess the deal. Therefore, I propose that not only the effect of value-positive attributes in a deal, but also the effect of value-negative attributes on market response would be strengthened when intense deal-level scrutiny occurs during conference calls or webcasts.

The empirical setting for this research is S&P 500 companies' 783 M&A announcements from 2005 to 2011. I first hypothesize the effects of deal attributes on the market responses to deal announcements as baseline hypotheses. Cash payment for acquisitions and industry relatedness as positive attributes, and relative deal size as a negative deal attribute are expected to be positively and negatively associated with acquirer's cumulative abnormal stock return, respectively. Then I hypothesize the moderating effect of deal-level scrutiny - rich media use for the deal announcement - on two baseline hypotheses. OLS regression results show that rich media use strengthens only the negative effects of relative deal size on market response. These findings suggest that rich media choice for M&A announcements should be made with caution because announcements using conference calls or webcasts can elicit more adverse market reaction if a deal or a firm has some negative attributes.

This work yields two contributions to the understanding of M&A contexts and analyst and manager behaviors in M&A announcements. First, this study attempts to fill the void in the

literature on the role of analysts and their monitoring effect. In the previous studies on analysts' role, the impacts of analyst coverage and recommendation on firms' strategies and performance have been largely studied (e.g., Rao & Sivakumar, 1999; Zuckerman, 2000; Benner & Ranganathan, 2012; Womack, 1996; Das, Guo, & Zhang, 2006). However, we know little about how analysts' scrutiny as their aggressive monitoring behavior influences market responses to a firm's M&A announcements, which are characterized by a high level of uncertainty and ambiguity. Besides positive outcomes of analyst scrutiny, such as a decrease in uncertainty, information asymmetry, or agency problem (Fama & Jensen, 1983; Gentry & Shen, 2013), this research especially focuses on the effect of increased transparency in the organization's information environment due to analysts' scrutiny. This increased transparency would clearly reveal all news, no matter whether it is positive or negative. Considering a manger's rich media use for the announcement as the trigger for analysts' intense scrutiny at the deal level, this paper contributes to behavioral strategy by improving the understanding of how managers' media choice for event announcements induces analysts to more closely scrutinize the event and eventually influence a firm's M&A performance. Second, this research decomposes analyst scrutiny into two levels: the firm-level and the event-level. Compared to the previous literature considering analyst scrutiny as a single level factor at the firm level and constant monitoring system, this paper proposes that the scrutiny should be viewed as separate critical forces at two levels and each level of scrutiny has different functions. Firm-level scrutiny measured by the number of analysts covering a firm influences a firm's strategies, which would be aligned with shareholders' interests (e.g., Gentry & Shen, 2013; Wright, Kroll, & Elenkov, 2002). By differentiating event-level scrutiny from firm-level scrutiny, I find that certain event attributes are more likely to attract high analyst scrutiny on the event above the analyst scrutiny on the

overall firm. In addition, this study shows that the analyst event-level scrutiny eventually impacts investors' decision making regarding the event in the stock market.

II. THEORY AND HYPOTHESES

1. How Does Analyst Scrutiny Occur and Influence the Behaviors of Firms?

Scrutiny is defined as ongoing and intense attention to an individual or an organization and close monitoring entailing frequent questions and interruptions (Sutton & Galunic, 1996). Firms are sometimes eager to attract public attention and manipulate it to their advantage, but sometimes the attention changes to severe scrutiny. Prior works have identified several antecedents which would arouse the analysts' scrutiny of a focal firm. First, high visibility of a firm attracts more attention from external constituents. Level of visibility increases with firm size or age (Meznar & Nigh, 1995; Pfeffer, 1973; Wang, Choi, & Li, 2008), eye-catching events, such as IPO, a firm's entry to regulated industry, and horizontal acquisitions (Bhagat, Dong, Hirshleifer, & Noah, 2005; Dean & Brown, 1995; He, 2008; Welbourne & Andrews, 1996), publicity from large media coverage (Bansal, 2005), or a large deviation from expected performance (e.g., Sanders, 2001; Mayew & Venkatachalam, 2012). Since the prominence of a focal firm or certain issues draws the high attention from external constituents, the firm or managers would experience high pressure to meet their expectations and face close observation of their behaviors by regulators, shareholders, market, press, or analysts. Second, scrutiny by investors or analysts occurs when there is a high level of uncertainty in a firm's information disclosure. For example, managers' announcements of good news with low levels of accuracy (Langberg & Sivaramakrishnan, 2008)

or a firm's voluntary disclosure with forward-looking information (Langberg & Sivaramakrishnan, 2010) would increase market scrutiny. Market participants' scrutiny, especially analysts' scrutiny, about the firm is often triggered by this uncertainty underlying the information disclosed, in order to assess quality of information and make an appropriate interpretation of the future. Third, analysts scrutinize a firm or managers when information search cost is lower than the benefits from the search. Analysts play an important role as information intermediaries between firms and markets, and their reputations and compensations are determined based on the accuracy of their forecasts and recommendations. To increase this accuracy, analysts are willing to pay for the costs of information acquisition as long as the costs are lower than the benefits from the acquisition. Therefore, the extent of analyst scrutiny for information acquisition is influenced by the efficiency of the information environment surrounding the firm under scrutiny. A non-U.S. firm's cross listing on U.S. stock exchanges increases analyst coverage of the firm (Lang, Lins, & Miller, 2003) and a firm's concentrated ownership with incentives to withhold or manipulate information reduces the number of analysts following the firm (Lang, Lins, & Miller, 2004). When analysts make a decision to follow newly privatized firms in foreign markets, the decision will be influenced by level of political risk, judicial efficiency, information disclosure, and effectiveness of the legal institution in the focal country (Boubakri & Bouslimi, 2010).

Scrutiny by stakeholders, such as public, boards, regulators, press, or analysts, influences a firm's behaviors and strategic decisions since managers seek to conform to societal expectations (DiMaggio & Powell, 1983; Meyer & Rowan, 1977) or meet the performance expectations of a market (Gentry & Shen, 2013). There are two pathways that analyst scrutiny especially influences the firm's behaviors: a decrease in agency problems and a reduction in

information asymmetry. From the agency theory perspective, managers are presumed to act in their own interests, which may not always be the best interests of the shareholders. For instance, one of the managerial motives for M&A may be the desire to decrease risk related to managerial human capital and to increase compensation, which are positively associated with an increase in firm size (Amihud & Lev, 1981). When a firm is highly scrutinized by analysts, however, managers tend to engage less in opportunistic behavior and the firm is less likely to experience the agency problem (Gentry & Shen, 2013; Fama & Jensen, 1983). Since analyst scrutiny works as an external monitoring mechanism, managers' actions for self-interest or against shareholders' interest could be easily caught, and then followed by severe interrogation by analysts. This pressure from analysts eventually affects a manager's behavior and strategic decisions. According to Gentry and Shen (2013)'s study, when a firm's performance had not met the analysts' forecasts, managers tended to cut R&D expenses in the following year. In their study, however, the firm's R&D intensity slightly increased when analyst coverage is high. Wright, Kroll, and Elenkov's (2002) research specifically shows how external monitoring activities influence the effect of M&A outcomes on CEO compensation. Their empirical results show that M&A returns are associated with changes in CEO compensation when external monitoring by analysts, institutional investors, and independent board members are vigilant while an increase in firm size leads to compensation changes when the acquirer is passively monitored. Another influence of analyst scrutiny on the firm's behavior is found through the reduction in information asymmetry between managers and shareholders. Analysts tend to prefer the firms or industries with low costs of information acquisition, where they could efficiently detect and process the information (e.g., Rao & Sivakumar, 1999; Zuckerman, 2000). Thus firms might create transparent information environments in an effort to help analysts' acquisition and proper

interpretation of the information about the firm. For instance, severe scrutiny by outside directors, large institutional investors, specialist auditors, or analysts influences a firm's behaviors by decreasing the possibility of a firm's concealment of negative outcomes or increasing the firm's use of transparent reporting formats (Abrahamson & Park, 1994; Lee, Petroni, & Shen, 2006). Such enhanced transparency in information disclosure plays an important role in reducing the information asymmetry between managers and shareholders. By retaining this transparency in managers' interaction with shareholders and analysts, managers expect to induce market's favorable perceptions of the firm or their decisions, which would eventually lead to better firm performance and higher firm valuation (Fombrun, Gardberg, & Barnett, 2000; Lang, Lins, & Miller, 2003).

While previous literature described how analyst scrutiny occurs and influences the behaviors of firms and managers exclusively at the firm-level, I propose that there might be another level of analyst scrutiny: at the event level. The extant studies on analyst scrutiny as a firm-level factor have considered analyst scrutiny as analyst coverage or analyst following, and 'covering' or 'following' generally means analysts' activity to issue the firm's earnings forecast (e.g., Farrell & Whidbee, 2003; Gentry & Shen, 2013; Rao & Sivakumar, 1999). Therefore, analyst scrutiny is generally measured by the number of analysts issuing the firm's annual or quarterly earnings forecast (e.g., Gentry & Shen, 2013; Zuckerman, 2000; Rao & Sivakumar, 1999). However, it is very unlikely that regardless of event types–earnings release, CEO turnover, strategic alliance, M&A, divestiture, new product development, and so on, or event attributes–value-positive or value-negative, the effects and the degree of analyst scrutiny on each corporate event or event outcome are almost same as long as the number of analysts following the firm does not change. The significance levels of individual events are all different in a

company. Some events might attract a high level of scrutiny, but others do not. For instance, in cases that the event is characterized of a lot of uncertainty or its expected outcome is not consistent with shareholders' interests, analysts might more closely scrutinize the firm. When firms make high strategic investments during the period of uncertain technological change, they might feel more pressure from analysts who believe the investments will not create shareholder value (Benner & Ranganathan, 2012). Therefore, I argue that besides the firm-specific scrutiny, each of a firm's events receives granular scrutiny at the event level. The effects of this additional event-level scrutiny depend on the event details, especially positive or negative attributes, which are closely associated with event-related performance. In the next section, I highlight how analyst event-level scrutiny critically functions in M&A context and moderates the relationship between deal attributes and acquirer performance.

2. Event attributes and a firm's market performance

Before I turn to the roles and impacts of analyst's scrutiny in M&A context, first, I provide a baseline proposition and hypotheses describing the relationship between event attributes and a firm's market performance. Strategy scholars have been interested in explaining what industry, firm, or individual factors help a firm outperform its rivals. Although there is no single absolute factor leading to a firm's financial success in the market, diverse event attributes accounting for some portion of financial success have been identified, for example, strategic alliance of firms with a dedicated alliance function (Kale, Dyer, & Singh, 2002), overseas acquisitions by emerging-economy firms (Gubbi, Aulakh, Ray, Sarkar, & Chittoor, 2010), gender effects in CEO appointment (Lee & James, 2007), early and fast mover effects in new product introduction (Lee, Smith, Grimm & Schomburg, 2000) or methods of payment in M&A (Travlos, 1987; Chang,

1998). The empirical results from these studies show that certain event attributes significantly influence a firm's financial performance after the effects of other attributes are controlled. This argument leads to the following proposition:

(Baseline) Proposition 1. Event attributes are associated with the firm's market performance on the event announcement date.

M&A is an uncertain and ambiguous corporate event to investors because of information asymmetry between managers and investors, forward-looking statements used in the announcement, and the possibility of multiple interpretations of the focal deal. M&A is not a common or regular event, so it would be highly visible to market participants. In addition, managers in acquiring firms tend to voluntarily provide investors and analysts with deal-relevant information and actively communicate with them in order to reduce the uncertainty perceived by the market. Their efforts to voluntarily communicate through M&A announcements may contribute to the transparency in their information environment, which analysts prefer. Due to a high level of uncertainty and visibility underlying M&A, and ease of information acquisition during its announcement, I consider M&A as an appropriate context to examine the effect of analyst event-level scrutiny.

In the following hypotheses, I adopt three deal attributes as a best illustration of value-positive and value-negative attributes leading to positive and negative M&A performance: relative deal size, method of payment, and industry relatedness between an acquirer and a target. These three variables were chosen from the variable lists of the 70 most cited M&A papers in Google Scholar. In those 70 papers, payment type is most often used (in 15 out of 70 papers), followed by relative acquirer size to target size (10 papers), acquiring firm size (9 papers), and

relatedness (8 papers). Relative deal size was selected as the best example of value-negative attributes and calculated by an acquirer's size divided by transaction value size. This is because two factors, an acquirer's firm size and transaction value involving acquisition premium and target size, are the typical examples of value-negative attributes of M&A deal (Moeller, Schlingemann, & Stulz, 2004; Kusewitt, 1985). Method of payment (cash payment) and industry relatedness are the most often used deal attributes as value-positive according to the variable list. Therefore, I chose these three variables as best suited to illustrate value-negative and value-positive attributes of a deal.

Large relative deal size, i.e., large transaction value compared to an acquirer's market value, means either paying a high acquisition premium or acquiring a large target compared to acquirer size. The amount of acquisition premium could be influenced by managerial hubris (Hayward & Hambrick, 1997) and acquisition of the large firm might be related to a top manager's incentive plan. Due to managerial hubris, acquiring managers believe that they can extract much value from the M&A (Roll, 1986) and tend to pay larger acquisition premiums in order to complete the offer. This overpayment for deal completion may cause negative post-merger performance of acquirers (Lubatkin, 1983; Varaiya & Ferris, 1987). In addition, the value created from acquisition can be considered as the amount of expected acquisition synergies which acquisition premium is subtracted from (Bruner, 2004; Sirower, 1997). The higher the premium paid, the smaller the value creation potential. From the acquirer shareholders' perspective, this would lead to their wealth reduction, which they do not want. Furthermore, from the moment the M&A deal is done, participating firms have responsibility to commit a certain amount of resources and investment specified in the agreement, no matter what will happen in the future. Thus, larger deals might result in acquirers' greater future risks, which will

be perceived by market participants. Kusewitt (1985) empirically verified the negative relationship between relative size of target to acquirer and both accounting ROA and market return. Similarly, Moeller, Schlingemann, & Stulz (2004) showed that the bulk of M&A-driven value destruction was concentrated in large deals. Due to the possibility of managerial hubris, large dollar loss, and greater future risks, the uncertainty perceived by investors would increase when a firm makes larger deals. This perceived uncertainty would negatively influence investors' decision making. Therefore, I first hypothesize:

(Baseline) Hypothesis 1a. Relative deal size compared to acquirer size is negatively associated with an acquirer's stock market return on the deal announcement date.

Empirical studies in accounting and finance fields show that bidders' cash offers lead to their positive market performance on the deal announcement date (e.g., Myers & Majluf, 1984; Travlos, 1987; Brown & Ryngaert, 1991). A bidding firm's managers prefer a stock offer when their stocks are overvalued by target firm's shareholders, but they offer cash when they believe their firm is undervalued (Myers & Majluf, 1984). In a market, accordingly, a cash offer is considered as a good signal that post-M&A performance would be positive. When the signal is reflected in an acquirer's market value, the acquirer's stock price will rise.

(Baseline) Hypothesis 1b. Cash payment for a deal is positively associated with an acquirer's stock market return on the deal announcement date.

When a firm acquires a target operating in the same or a similar industry, familiarity with the target industry increases the acquirers' capability to leverage their existing resources in the target's operations, reduces the need for the acquirer to learn businesses and industries of a

target, and facilitates the post-merger integration process (Hitt, Harrison, & Ireland, 2001; Roberts & Berry, 1985). Numerous M&A studies empirically show that acquiring a related target positively influences acquisition performance in terms of both acquirers' financial return and accounting return (Bettis & Hall, 1982; Kusewitt, 1985; Singh & Montgomery, 1987; Palich, Cardinal, & Miller, 2000). Therefore, industry relatedness between acquirers and targets would lead to the positive market response to the M&A announcement by attracting a 'buy' decision of investors. Here I posit hypothesis 1b:

(Baseline) Hypothesis 1c. Industry relatedness between acquirer and target is positively associated with an acquirer's stock market return on the deal announcement date.

3. Event-level Analyst Scrutiny

Analyst scrutiny at the event level may be triggered by diverse event attributes. Event-specific uncertainty, the possibility of agency problems regarding events, or the efficiency in an environment of event information might increase or decrease analyst scrutiny about the event. In this research, I propose this analyst scrutiny triggered by certain event attributes will moderate how markets perceive and respond to a particular event. As one of such attributes, managers make a media choice for an event announcement among various communication channels, such as news releases, conference calls, webcasts, and shareholder meetings. According to media richness theory (Daft & Lengel, 1984, 1986; Daft, Lengel, & Trevino, 1987), communication messages should be delivered through channels with sufficient and appropriate media richness capacities in order to deal with uncertainty and equivocality underlying situations, and consequently improve communication and task performance. Each medium can be ranked on a richness continuum, depending on its capacity for delivering information and cues, highlighting

the details and providing receivers (in this case, analysts) with opportunities to directly interact with managers. Daft and Lengel (1986) suggest that rich media, such as face-to-face meetings and telephone conversations, are suitable for equivocal situations while lean media, such as written documents, are better suited for resolving uncertainty. If messages are announced on channels that are inappropriate to either the equivocality of a situation or the richness of the information to be transmitted, receivers may misinterpret the intended purpose or the meanings (Trevino, Lengel, & Daft, 1987; Trevino, Lengel, Bodensteiner, Gerloff, & Muir, 1990). In the research of media synchronicity theory (Dennis & Valacich, 1999; Dennis, Fuller, & Valacich, 2008), authors argue that communication performance depends on a fit between primary processes of communication, conveyance and convergence, and the level of media synchronicity which is influenced by five capabilities, such as symbol sets, parallelism, transmission velocity, rehearsability, and reprocessability. According to this theory, using high synchronicity media for convergence process would lead to better communication performance. Appendix A shows how different channels are arrayed along a media richness continuum and discusses current controversies about media richness theory.

Before event announcements, firms will choose a medium to transparently and unequivocally disclose the event-related information and to facilitate shared understanding of its potential for value creation among market participants. In an effort to get the word out, managers often supplement a mandatory SEC filing with additional disclosures through lean media such as news releases and/or through rich media such as conference calls and webcasts. Especially conference call users could deliver more information and emphasize specific event details, compared to non-conference call users (Kimbrough & Louis, 2011). Therefore, managers would

additionally choose rich media for event announcements in order to "strategically" highlight positive or supportive aspects that help them make their case.

Announcements using rich media, however, would also provide analysts with an opportunity to scrutinize the event more closely. Analysts usually scrutinize firms when the cost of monitoring or acquiring information is lower than its benefit. In event announcements, managers provide relevant information and suggest appropriate interpretation frames to help investors and analysts' information processing about the event. Since the enactment of Regulation Fair Disclosure[1] in 2000, if a firm discloses significant information to analysts or institutional investors, the firm should simultaneously disseminate the information to all market participants. Therefore, firms may choose rich media (conference calls/ webcasts) to release the information to all of analysts and investors at the same time at low cost. During rich media announcements, analysts directly ask questions to mangers or require additional information. This direct interaction lowers analysts' cost for monitoring and information acquisition. Considering the high visibility of conference calls/webcasts and the low cost of information acquisition, I suggest that a public firm's event announcement using rich media heightens event-level scrutiny.

---

[1] Excerpt from "Final Rule: Selective Disclosure and Insider Trading" (Reg FD)

"As a general matter, acceptable methods of public disclosure for purposes of Regulation FD will include press releases distributed through a widely circulated news or wire service, or announcements made through press conferences or conference calls that interested members of the public may attend or listen to either in person, by telephonic transmission, or by other electronic transmission (including use of the Internet). The public must be given adequate notice of the conference or call and the means for accessing it. The regulation does not require use of a particular method, or establish a "one size fits all" standard for disclosure; rather, it leaves the decision to the issuer to choose methods that are reasonably calculated to make effective, broad, and non-exclusionary public disclosure, given the particular circumstances of that issuer. Indeed, we have modified the language of the regulation to note that the issuer may use a method "or combination of methods" of disclosure, in recognition of the fact that it may not always be possible or desirable for an issuer to rely on a single method of disclosure as reasonably designed to effect broad public disclosure."

Based on the argument on transparency in information disclosure, I propose a moderating effect of rich media use as event-level scrutiny on the relationship between event attributes and market response. In other words, the degree of event attribute effects on market response would change, depending on the extent of event-level scrutiny, since intense analyst scrutiny leads to more extensive disclosure and higher transparency in information environment. As a result of fierce scrutiny, the effects of value-positive or value-negative event attributes on event performance would be strengthened. During the Q&A section of conference calls or webcasts, analyst scrutiny will reveal and magnify the positive sides of an event, but also potentially uncover and confirm its negative sides.

Proposition 2. Analyst scrutiny at the event level moderates the effects of event attributes on the firm's market performance.

4. Deal-level Analyst Scrutiny in M&A Context

In the M&A context, analysts' event-level scrutiny occurs at each deal. Analysts perceive various deal-level uncertainty and risks, depending on an acquirer's situation, target firm attributes and deal contents. Besides the uncertainty inherent in each deal, it is well known that a vast majority of deals would not bring material and significant returns to acquiring firm shareholders (Bruner, 2002). In addition, top managers face two significant challenges in M&A announcements. First, investors are highly skeptical of promised synergies because of the potential agency problems and information asymmetry between shareholders and managers. The second challenge is the diversity of stakeholder stances, which will lead to individuals' disparate speculations about what would occur and change by the deal. The same announcement content can be, therefore, differently interpreted depending on the stakeholders' perspectives. Due to

these challenges, the roles of analyst as an information intermediary and a monitoring system are greatly highlighted in the information environment around M&A announcements.

To briefly explain the information environment around a firm's announcement in M&A contexts, I consider three parties to be key players influencing dynamic information processing in the stock market: a firm's top managers, financial analysts, and investors. Top managers provide investors and analysts with relevant information about the deal. For example, the CEO or CFO provides them with transaction-related information, such as deal rationale, expectations for future synergies, financing, regulatory approvals and the M&A implementation process. In an effort to effectively and widely disseminate the information and meet the communication goal, firm managers choose appropriate media for the M&A announcements. The information delivered through the media is expected to lead to a shared understanding of potential value creation, and then to allay investors' concerns regarding the deal. The delivery of information is intended to eventually influence analysts' evaluation of the focal deal and investors' decision making. Financial analysts collect information from published reports or announcements by the firm, process it and subsequently share their expert opinions with investors through analysis reports. Based on the analysis results, they make specific recommendations on the firm's stock (strong buy, buy, hold, or sell). When managers attempt to influence the other market participants' decision making by voluntarily providing information, analysts' scrutiny might be greater. This is because analysts' reputations and compensations are determined based on the accuracy of their forecasts and recommendations, and firms' announcements could be a good opportunity for them to monitor firms and acquire more information at low cost. Mayew, Sharp, and Venkatachalam (2013) found that initial annual earnings forecasts offered by analysts participating in conference calls are more accurate and timelier, compared to nonparticipating

analysts' forecasts. In order to increase their forecast accuracy, analysts elicit private or hidden information and intensely scrutinize the firm to detect managers' motivation and intention behind the deal. Investors in turn assess the profitability of the deal, relying on a firm's announcement and/or on analyst's reports. After the assessment, they decide to buy, hold, or sell that stock. The three parties' information processing, decision and action play crucial roles in setting the stock price of the announcing firm: if investors like what they hear or see in an acquiring firm's M&A announcement or they follow analysts' strong recommendation of the announcing firm's stock, they will buy or hold the stock of the firm. This investment decision will drive stock prices up and create shareholder wealth (Madhavan & Prescott, 1995). On the other hand, if investors are not induced by what a manager announces or analysts do not recommend the firm, they will sell the stock of the acquiring firm and the acquiring firm's stock prices will go down. Figure 1 shows these information processing flows among the three key players and the role of analyst scrutiny during M&A announcements. In the following section, I examine how the deal-level scrutiny influences the relationship between deal attributes and market response to the deal announcement.

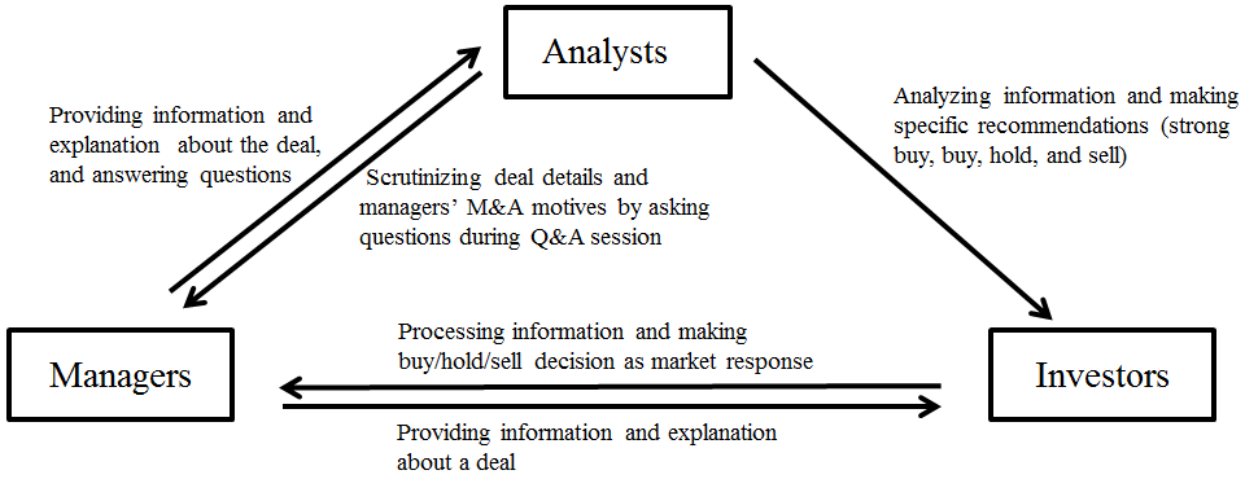


Figure 1. Information processing flows during M&A announcements

5. Moderating Effects of Deal-level Analyst Scrutiny

When the acquiring firm announces a deal with certain negative attributes such as large relative deal size, it tends to heighten the extent of analysts' attention due to its high visibility and risk. Therefore, managers' rich media use for the announcements could be positively associated with the possibility for analysts to closely examine the deal details and directly ask about the motivation of the deal, especially which includes value destroying attributes. Open conference calls make immediate and broad dissemination of news, regardless of whether the news is beneficial to the announcing firm or not. Negative or uncertain deal details will result in harsher interrogation and managers' defensive responses, if any, will be immediately detected by analysts. Hollander, Pronk, and Roelofsen (2010) examined that managers' silence in not directly answering analysts' question or their reluctance to answer can be negatively interpreted by the market as signaling bad news or withholding information, eventually leading to discounted stock. The bad impression resulting from a previous analyst's question might be also reinforced by triggering follow-up questions from other analysts. This echo effect would begin with one analyst's cynical question, managers' suspicious behavior implying that they might withhold information, or mangers' inability to defend the deal against negative comments by analysts. Since then, the mood of conference call could be altered and following analysts may keep raising unfavorable questions. These analysts' behaviors can be explained in diverse ways, such as imitating (Rao, Greve, & Davis, 2001), signaling (Scharfstein & Stein, 1990), and herding (Welch, 2000; DeBondt & Forbes, 1999; Kim & Pantzalis, 2003). The bad signals generated during the announcements through conference calls/webcasts will spread out very quickly and broadly through the huge audience base. Sirower and Lipin (2003: 23) said "many companies have discovered it's hard to put the genie back in the bottle once a deal gets a bad reception."

The negative factors discovered and emphasized by analysts would be followed by the market's concerns about future expected earnings of the firm. Therefore, I hypothesize that the effect of negative deal attributes on the market's response will be exacerbated when the deal is announced through rich media and the deal-level scrutiny increases. Thus:

Hypothesis 2a. Analyst scrutiny at the deal level will strengthen the negative effect of relative deal size on an acquirer's stock market return on a deal announcement date.

When a deal includes value-positive deal attributes and it is announced via conference call or webcasts, the moderating effect of analyst scrutiny at the deal level will be also positive. Managers could directly highlight and widely broadcast good sides of the deal during a presentation section or indirectly disseminate the information by answering analysts' follow-up questions. Analysts' favorable evaluations about the deal or positive reactions to managers' decisions will quickly reach a broad audience. Even when analysts interrogate managers about deal details, managers could handle the situation by treating it as another opportunity to emphasize the positives. Uncertainty perceived by investors will diminish after the well-managed conference call with informative presentations and a corroborating Q&A session. Therefore, conference call use as a proxy of deal-level scrutiny has a positive moderating effect on the relationship between positive deal attributes, such as cash payment for a deal and industry relatedness, and market response to the announcement.

Hypothesis 2b. Analyst scrutiny at the deal level will strengthen the positive effect of cash payment on an acquirer's stock market return on a deal announcement date.

Hypothesis 2c. Analyst scrutiny at the deal level will strengthen the positive effect of industry relatedness on an acquirer's stock market return on a deal announcement date.

Figure 2 depicts the hypothesized model of analyst deal-level scrutiny as a moderator between two deal attributes and an acquirer's performance.

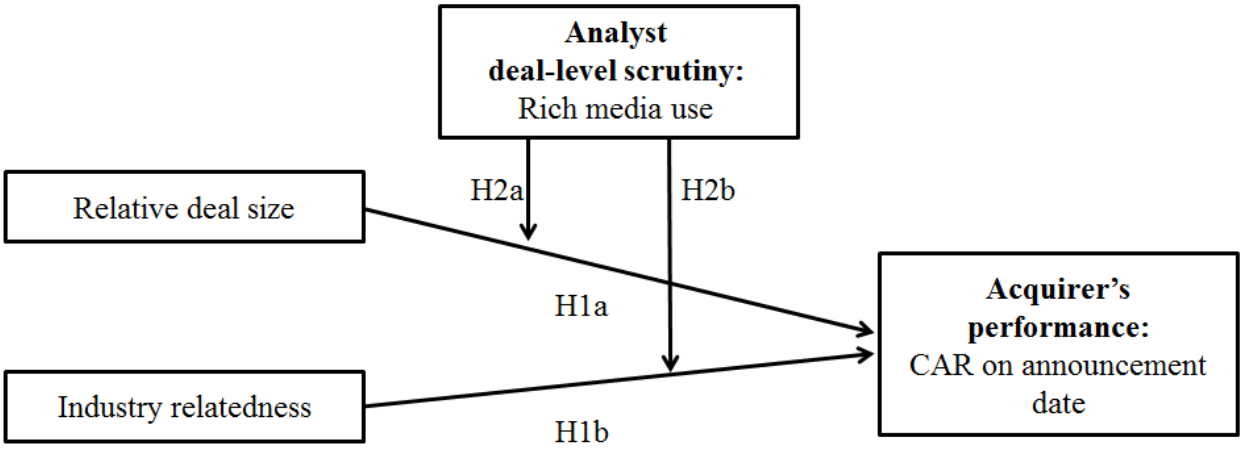


Figure 2. Analyst scrutiny at deal-level as moderator

III. METHODS

1. **Data and Sample**

The sample consists of publicly disclosed acquisitions by U.S. S&P 500 companies for the seven years 2005 through 2011. I focused on S&P 500 companies' M&A announcements because the investment community gives greater attention to large firms, such as S&P 500, Fortune 500, or NYSE-listed firms (Baker, Powell, & Weaver, 1999), such that their announcements will not be neglected and the effects of their announcement can be appropriately reflected in analysts' evaluations and shareholders' investment decisions. In addition to this visibility issue, small firms' conference call for M&A might bring unusual attention from investors and analysts to their announcement since it does not commonly happen in small firms. The impact of their announcement medium choices could be biased due to this attention effect. Thus, I included S&P 500 firm's deal announcements in the sample, especially when those firms were on the list of S&P 500 index. If there is a time period while a company was out of the list, I did not count its deal announcements during that time. I also dropped the companies that went bankrupt, were acquired, or went private when the data was collected. I finally identified 693 U.S. non-finance acquirers listed during this period on S&P 500.

I collected data on all M&A deals by those 693 companies from the Securities Data Corporation (SDC) and screened the announcements to ensure that (1) no other M&A

announcements occurred on the same date and the next date, (2) there were no other major announcements on the M&A announcement date, (3) stock repurchase (buyback) was not included, and (4) multiple documented deals between the same acquirer and the same target are considered to be only a single deal. I also dropped the observations which have another deal announcement on the next date in order to reduce any mixed effects between two deals. To control for deal-related, firm-related, and industry-related factors, I also screened out M&A deals which did not provide full financial and accounting information about the deals and the acquirers. The final sample consisted of 784 M&A announcements by 255 companies in 134 industries. Data on M&A announcement dates and several deal related control variables (discussed below) came from the SDC database for 2005-2011. The announcement media used by acquirers were confirmed via Thomson One database. Acquirers' financial and accounting data were obtained from Compustat, and daily market return data from Eventus.

2. Measures

2.1. Dependent Variable and Independent Variables

Acquirer's cumulative abnormal return The dependent variable is the stock market response to the acquirer's M&A announcement. The event study method was used to measure cumulative abnormal returns on the announcement date as the market response. This methodology has been widely used in M&A research in strategy (e.g., Uhlenbruck, Hitt, & Semadeni, 2006; McNamara, Haleblian, & Dykes, 2008). This study focuses on deal announcements and the subsequent analyst scrutiny as behavioral factors which could affect the market reaction to the M&A deal. There are several reasons that cumulative abnormal returns (CARs) from the event study are the appropriate measure for the market response in this paper. First, to test the

announcement effect, the assumption that stock market reaction presages the actual outcomes of an M&A deal is not necessary. The event study method provides this research with a proper way of testing differences in market response to M&A announcements across deals, after controlling for other deal-related, firm-related, and industry-related factors. In addition, only abnormal returns surrounding the event announcement are immediately reflected in the event study output if the length of the event window is sufficiently short. It is less likely to be affected by many confounding factors, such as any negative/positive news of the firm's current business as well as other strategic decisions which may affect its performance.

Cumulative abnormal returns for all acquirers in this study were obtained by using Eventus via the Wharton Research Data Services website. For event studies, Eventus uses data collected directly from the Center for Research in Security Prices (CRSP) stock databases or pre-extracted from any other sources. The event window was established as the day of the event and the next day (Day 0 to 1). To achieve accurate results, I confirmed the date on which the M&A announcements were really made by comparing the announcement dates collected from the SDC database to the news release dates from Thomson One or conference call dates from the Bloomberg database. Announcement dates of 9 cases were different from the announcement dates collected from the SDC database. Conference call or webcast dates of 29 cases were different from their news release dates. I chose the news release dates or the conference call/webcast dates verified by Thomson One or Bloomberg database because those are the dates on which announcements were really made and the event study can capture the valid effects of announcement media choice on that day. Ordinary Least Squares was used as the estimation method because all acquirer firms are S&P 500 companies so there is less likelihood that thinly traded securities could be underreported when large differences exist in the volumes traded of

stocks in the sample (cf. Peterson, 1989). The Patell test was used to mitigate the cross-sectional correlation (Patell, 1976) and the CRSP value weighted index is used as the proxy for the market in the market model.

To avoid extreme values that might result from unusual circumstances, for a dependent variable, acquirer's cumulative abnormal return, I excluded outliers that were beyond four standard deviations from the yearly means. This eliminated 3 observations, approximately 0.38% of the total sample.

Relative deal size Relative deal size as an independent variable was measured by the ratio of total transaction value to the buyer's pre-announcement market value as of the beginning of the fiscal year. This variable was created as the natural logarithm of the original values.

Cash payment is a continuous variable measured by the proportion of cash in the deal. The cash payment may signal to investors that post-acquisition performance will be positive (King et al., 2004), and eventually lead to positive market reaction to the deal announcement. Since the original value is highly skewed, cash-paid deal was measured as the natural logarithm of the original values.

Industry relatedness Related acquisitions enable the acquirer to achieve cost savings through divestiture or redundant assets (Capron, 1999) and to facilitate learning from the acquisition process (Hitt, Harrison, & Ireland, 2001). Due to these potential synergies between acquirers and targets, investors may more highly value related acquisition than unrelated acquisition. After reviewing diverse measurements for the construct, industry relatedness, in the previous literature, I was convinced that the SIC code-based measurement for the dummy variable might be the appropriate way to increase the effectiveness and efficiency of my model test and reflect analysts' perspectives on 'industry relatedness'. First of all, the majority of

previous studies have used SIC codes to measure industry relatedness as a categorical or a continuous variable. Of 48 papers with this construct published in Strategic Management Journal, 31 papers used SIC codes (or NAICS codes) for the variable, such as industry relatedness, business similarity, or type of acquisition (e.g., Hayward & Shimizu, 2006; Kroll, Wright, Toombs, & Leavell, 1997; Villalonga & McGahan, 2005; Laamanen & Keil, 2008). Several alternatives have been also introduced in existing research. Some papers used the list of patent numbers appearing in both an acquirer's knowledge base and a target's knowledge base to measure technology relatedness or knowledge relatedness (e.g., Ahuja & Katila, 2001; Grimpe & Hussinger, 2014; Makri, Hitt, & Lane, 2010). Others used customer similarity to measure market relatedness (e.g., Homburg & Bucerius, 2006). Capron, Mitchell, and Swaminathan (2001) collected the data through a survey to see how managers perceive the extent of business similarity between acquiring firms and targets. Park (2003) and Seth (1990) used the Federal Trade Commission typology for the classification of M&A type. Considering the diversity of firms and industries in my sample (134 industries from S&P 500 list) and the large sample size collected from 2005 to 2011 (783 deals by 255 acquirers), however, I decided that using a dummy variable would be the most efficient way to operationalize industry relatedness. Second, in the previous literature studying security analysts' roles in the financial market or their impacts on the firm's market performance, industries were classified using firms' SIC code. Westphal and Graebner (2010) used a two-digit SIC code to measure diversified acquisitions when they studied how CEOs manage the impressions of analysts. Zuckerman (2000) chose a three digit SIC industry code as the level of analysis to test the impact of securities analysts' industry specialization on the firm's de-diversification strategy. To account for industry competition, Luo, Wang, Raithel, and Zheng (2015) used SIC codes to define the industry in which firms compete

and posited that corporate social performance information is reflected in security analyst's recommendation, which influences general investors' decision making. To explain the effect of analyst research on unrelated spun-off subsidiaries, four digit SIC codes were used to indicate the unrelatedness between spun-off units and their parent firms (Feldman, Gilson, & Villalonga, 2014).

Following Morck, Shleifer, and Vishny (1990)'s research, I measured industry relatedness between acquirer and target using the four-digit SIC codes of the six main lines of business (by sales) in which the acquirer and target operate. If the firm operates in fewer than six 4-digit industries, all its industries were used. If the acquirer and the target have at least one 4-digit sic code in common among the top six lines of business, the deal was coded as "related." Otherwise, the deal was coded as "unrelated." This is the widely used measurement for the construct, 'industry relatedness' (Morck, Shleifer, & Vishny, 1990; Haleblian & Finkelstein, 1999; McNamara, Haleblian, & Dykes, 2008) and the most appropriate way, considering the large size of firms in the sample, which implies that they have diverse business segments. In this case, there could be potential business overlaps that acquirers and targets operate in the same industry, but the industry might not be their primary focus. Therefore, this could be the inclusive and effective method to consider various main lines of business for industry relatedness measurement, especially when the sample includes large size firms.

Although it was not chosen for this study, there could be an alternative way of measuring industry relatedness based on SIC code. It is a continuous measure to indicate the extents of relatedness: in terms of the primary SIC code, if the acquiring firm and target shared the first two digits, a score of 2 was assigned, if they shared the first three digits, a score of 4 was assigned, and if they shared all four digits, a score of 6 was assigned. If they shared any of the

SIC codes other than the primary SIC code, 'relatedness' was scored as 1 assuming a two-digit match, 2 if there was a three-digit match, and 3 was assigned if there was a four-digit match (Haleblian & Finkelstein, 1999; Kroll, Walters, & Wright, 2008; Laamanen, Brauer, & Junna, 2014; Laamanen & Keil, 2008). This continuous measure is significantly positively correlated with my dichotomous measure ($p < .001$). The OLS model with this continuous measure shows the same results with the model's results including the original dichotomous measure.

2.2. Moderator

Deal-level analyst scrutiny (*Rich media choice*) This is a binary variable that takes the value of 1 when the acquirer used rich media for the deal announcement, such as webcasts or conference calls, and 0 otherwise. All 784 deal announcements were verified in the database and it indicated that rich media were used for 213 announcements.

2.3. Control Variables

Differences in the acquirer's M&A returns can be attributed to differences in the characteristics of the acquirer, the deal, and the target. To control for those attributes, I included several control variables.

Acquirer attributes

Firm-level analyst scrutiny was measured by the number of analysts following the acquirer. Since deal-level scrutiny is considered as the scrutiny of special events which is added to firm-level scrutiny a firm usually experiences, this variable was controlled to see the effect of only deal-level scrutiny. From the I/B/E/S detail history, this variable was measured as the

number of analysts issuing yearly earnings per share forecasts during the fiscal quarter in which the deal is announced. This variable was created as the natural logarithm of the original values. *Book to market ratio* was measured as the ratio of the acquirer's book value to its market value of equity as of the beginning of the fiscal year in which the deal is announced. This ratio represents the acquisition probability of the firm as well as valuations of the firm's assets (Gaur, Malhotra, & Zhu, 2013) and it could be negatively associated with bidder returns (Lang, Stulz, & Walkling, 1989). *Acquirer market value* was measured as a proxy of the acquirer size by calculating the natural logarithm of the market value of equity at the beginning of the fiscal year in which the deal is announced. The acquirer size is negatively correlated with the bidders' stock market return since large firms are more likely to pay more acquisition premium or to complete the deal due to large firms' hubris (Moeller, Schlingemann, & Stulz, 2004). *Pre-acquisition firm profitability* was measured by subtracting the median industry ROA value from the firm-level ROA value measured in the fiscal year before an acquisition year. The existing research shows that firms with better financial performance make better acquisitions (Morck et al., 1990). In the previous literature, *Acquirer slack* has shown the mixed results of the relationship with acquisition performance. Hitt, Harrison, and Ireland (2001) indicated that more slack led to less costly debt financing, which is related to success of acquisitions. Lang, Stulz, and Walkling (1991) found that a firm with less slack is less likely to make an unprofitable acquisition due to lack of cash to spend. To control for the effect of acquirer slack, following Hayward and Hambrick (1997), I measured acquirer slack using the ratio of the acquirer's current assets divided by its current liabilities and used it in the form of the log of its value. *Deal experience* from past deals may facilitate the processes for the target identification (Hitt, Harrison, Ireland, & Best, 1998) and integration of acquired firm resources, which may improve M&A

performance (King et al., 2004). In addition, managers with lack of acquisition experience are susceptible to escalation of commitment, which will be associated with high M&A costs (Haspeslagh & Jemison, 1991). This variable was measured as the total number of acquisitions undertaken by an acquirer in the previous 5 years before the deal was announced. *Acquirer_Hightech industry* was created as a categorical variable with an acquirer's primary two-digit SIC code to control for any acquirer's industry-specific attributes. 1 was coded for firms with SIC codes of 28, 35, 36, 73, or 87, and 0 otherwise. *Acquirer_Industry profitability* was measured by 3-year average returns on assets (ROA) of the primary three-digit SIC industry of an acquirer in the fiscal year before an acquisition year (Hambrick & Cannella, 1993). This variable would control the effects of industry-level profitability on the acquirer's performance.

Target attributes

Target_Public was coded as 1when the target is a public company, and 0 otherwise. The direct effect of target firm types, such as private, public or subsidiary, on the stock market response depends on payment type, cash or stock (Fuller, Netter, & Stegemoller, 2002). Crossborder deal was measured to control the effect of the target's location. I made a dummy variable, called '*Target_Foreign*' that takes the value of 1 if the target is located outside of the U.S., and 0 otherwise. This variable captures the possibility that domestic investors lack visibility in foreign firms (Covrig, Lau, & Ng, 2006) and investors' uncertainty and skepticism might increase with this lack of visibility (Kimbrough & Louis, 2011).

Deal attributes

Year of transaction is a dummy variable for each of the years in my sample (2005-2011) in order to control for temporal effects on the deal performance.

3. Data Analysis

Since the data were collected at the deal level, the firm level, and the industry level, I developed a multilevel model of analysts' deal-level scrutiny effect on market response. However, intra-class correlation coefficients (ICC) were very small in all three types of multilevel models: deal level and firm level as a two-level model, deal level and industry level as a two-level model, and deal level, firm level and industry level as a three-level model (See Appendix B). Based on these small ICCs, it is assumed that the dependent variable, an acquirer's cumulative abnormal return, differs neither across the firm-level nor across the industry level and there is not a good deal of intra-firm or intra-industry homogeneity. Therefore, I decided to use ordinary least-squares (OLS) analysis to test the influence of deal attributes on the market response to the deal announcement and to test the moderating effect of deal-level analyst scrutiny on the relationship. Before I tested the main effects and moderating effects, I considered the possibility of endogeneity on media choice. Because firms anticipate the positive market reaction to their announcements and this expectation might affect the firm's decision on announcement media, the relationship between media choice and the observed market reaction to the announcement could be endogeneous (Kimbrough & Louis, 2011). To account for this issue, the OLS model incorporated the endogeneity correction for self-selection (λ) according to Heckman (1979). This λ is the inverse Mills' ratio calculated based on the following probit estimation equation (Kimbrough & Louis, 2011):

$$RICH\ MEDIA\ CHOICE_i = \alpha_0 + \alpha_1 PAYMENT\_CASH_i + \alpha_2 RELATIVE\ DEAL\ SIZE_i + \alpha_3 INDUSTRY\ RELATEDNESS_i + \alpha_4 TARGET\_\ PUBLIC_i + \alpha_5 TARGET\_\ FOREIGN_i + \alpha_6 ACQUIRER\_MARKET\ VALUE_i + \alpha_7 BOOK\ TO\ MARKET\ RATIO_i + \alpha_8 ACQUIRER\_NUMBER\ OF\ ANALYSTS_i + \alpha_9 ACQUIRER\_ISTITUTIONAL\ OWNERSHIP_i + \alpha_{10} ACQUIRER\_REGULATED\ INDUSTRY_i + \alpha_{11} ACQUIRER\_HIGHTECH\ INDUSTRY_i + \alpha_{12} EARNINGS\ ANNOUNCEMENT + yearly\ fixed\ effects + \varepsilon_i$$

where *RICH MEDIA CHOICE* is a dummy variable for the announcement media choice, coded 1for conference call or webcast use and 0 otherwise. *PAYMENT_CASH* captures the percentage of deal payment with cash. *RELATIVE DEAL SIZE* means the ratio of the total transaction value to the acquirer's pre-announcement market value as of the beginning of the fiscal year. *EARNINGS ANNOUNCEMENT* is coded as 1 when the deal announcement is held within five days of a quarterly earnings announcement date in order to control for the effects of earnings releases. *INDUSTRY RELATEDNESS* is measured by industry relatedness between acquirer and target using the four-digit SIC codes of the six main lines of business (by sales) that the acquirer and target operate in. *TARGET_ PUBLIC* and *TARGET_ FOREIGN* are coded as 1 when the target firm is public and foreign respectively, and 0 otherwise. *ACQUIRER_MARKET VALUE* means an acquirer's market value of equity at the beginning of the fiscal year in which the merger is announced. *BOOK TO MARKET RATIO* is the ratio of an acquirer's book value of equity to its market value of equity as of the beginning of the fiscal year in which the deal is announced. *ACQUIRER_NUMBER OF ANALYSTS* is the number of analysts issuing earnings per share forecasts for the fiscal quarter in which the deal is announced and *ACQUIRER_ISTITUTIONAL OWNERSHIP* is the percentage of the acquiring firm's stock held

by institutional investors at the beginning of the quarter in which the M&A is announced. *ACQUIRER_REGULATED INDUSTRY* and *ACQUIRER_HIGHTECH INDUSTRY* are dummy variables coded as 1 when acquirers are in regulated industry (two-digit SIC codes of 48 or 49) and high technology industry (two-digit SIC codes of 28, 35, 36, 73, or 87), respectively. *Yearly fixed effects* is measured as a dummy variable for each of the years in my sample (2005-2011). Appendix C shows the result of probit estimation regarding determinants of managers' rich media choice for M&A announcements.

.

IV. RESULTS

1. Results

Table 1 presents descriptive statistics and correlations for all direct effects examined in the study.

Table 2 depicts the results from nine models for 784 deals from 2005 to 2011.

Table 1. Descriptive Statistics and Correlations

Variable	Mean	S.D	1	2	3	4	5	6
1 CAR	-0.000	0.031						
2 Richmedia Choice	0.272	0.445	-0.147 ***					
3 Relative deal ratio_ln	-4.231	2.010	-0.122 ***	0.545 ***				
4 Payment_Cash_ln	4.311	0.957	0.109 **	-0.138 ***	-0.201 ***			
5 Industry relatedness	0.680	0.467	0.049	0.087 *	0.161 ***	-0.146 ***		
6 Number of Analysts following acquirer_ln	2.949	0.477	-0.071 *	0.036	-0.216 ***	-0.052	0.100 **	
7 Book to Market ratio	0.399	0.268	-0.114 **	0.021	0.173 ***	-0.068 †	0.007	-0.138 ***
8 Acquirer_Market value_ln	9.822	1.234	-0.033	-0.013	-0.342 ***	-0.015	0.034	0.462 ***
9 Acquirer_Profitability	0.020	0.092	-0.004	-0.021	-0.136 ***	0.102 **	-0.013	0.106 **
10 Acquirer_Slack_ln	0.575	0.532	0.068 †	-0.024	-0.084 *	-0.002	0.020	0.135 ***
11 Acquirer_Deal experiences_ln	2.590	0.776	0.005	-0.033	-0.319 ***	0.094 **	-0.053	0.325 ***
12 Acquirer_hightech industry	0.483	0.500	-0.010	0.035	-0.179 ***	0.037	0.084 *	0.282 ***
13 Acquirer_Industry profitability	0.047	0.029	-0.058	0.078 *	0.000	0.057	0.043	0.042
14 Target_Public	0.343	0.475	-0.099 **	0.332 ***	0.350 ***	-0.076 *	0.047	0.014
15 Target_Foreign	0.284	0.451	0.068 †	-0.137 ***	-0.130 ***	0.098 **	-0.022	-0.073 *
16 Correction for Self-selection (λ)	1.668	1.056	0.118 ***	-0.555 ***	-0.884 ***	0.159 ***	-0.145 ***	-0.070 †

N=784. † p<.10; * p<.05; ** p<.01; *** p<.001

Table 2. Descriptive Statistics and Correlations (Cont'd)

Variable	7	8	9	10	11	12	13	14	15
8 Acquirer_Market value_ln	-0.306 ***								
9 Acquirer_Profitability	-0.280 ***	0.251 ***							
10 Acquirer_Slack_ln	-0.079 *	-0.066 †	0.005						
11 Acquirer_Deal experiences_ln	-0.124 ***	0.518 ***	0.099 **	-0.022					
12 Acquirer_hightech industry	-0.212 ***	0.188 ***	-0.035	0.322 ***	0.276 ***				
13 Acquirer_Industry profitability	-0.146 ***	0.123 ***	0.137 ***	-0.055	0.027	0.159 ***			
14 Target_Public	0.036	0.165 ***	0.043	-0.112 **	0.042	-0.000	0.092 *		
15 Target_Foreign	-0.011	-0.036	0.053	0.039	0.006	-0.050	-0.059	-0.164 ***	
16 Correction for Self-selection (λ)	-0.025	0.081 *	0.069 †	-0.001	0.114 **	-0.084 *	-0.071 *	-0.444 ***	0.254 ***

N=784. † p<.10; * p<.05; ** p<.01; *** p<.001

Table 2. Results of OLS regressions predicting cumulative abnormal return on announcement day

	Model 0		Model I		Model II		Model III		Model IV	
Intercept	0.029**	(0.011)	0.032**	(0.011)	0.015	(0.013)	0.027*	(0.011)	0.016	(0.013)
Number of Analysts following acquirer	-0.005†	(0.003)	-0.005*	(0.003)	-0.005†	(0.003)	-0.006*	(0.003)	-0.006*	(0.003)
Book to Market ratio	-0.014**	(0.005)	-0.014**	(0.005)	-0.014**	(0.005)	-0.015**	(0.005)	-0.014**	(0.005)
Acquirer_Market value_log	-0.001	(0.001)	-0.002	(0.001)	-0.001	(0.001)	-0.001	(0.001)	-0.002	(0.001)
Acquirer_Profitability	-0.006	(0.013)	-0.009	(0.013)	-0.009	(0.013)	-0.006	(0.013)	-0.011	(0.013)
Acquirer_Slack	0.004†	(0.002)	0.003	(0.002)	0.004†	(0.002)	0.004†	(0.002)	0.004	(0.002)
Acquirer_Deal experiences_log	0.002	(0.002)	0.001	(0.002)	0.001	(0.002)	0.002	(0.002)	0.001	(0.002)
Acquirer_hightech industry	-0.002	(0.003)	-0.003	(0.003)	-0.002	(0.003)	-0.003	(0.003)	-0.003	(0.003)
Acquirer_Industry profitability	-0.045	(0.042)	-0.041	(0.042)	-0.050	(0.042)	-0.048	(0.042)	-0.048	(0.042)
Target_Public	-0.004†	(0.002)	-0.001	(0.003)	-0.004†	(0.002)	-0.005†	(0.002)	-0.001	(0.003)
Target_Foreign	0.003	(0.002)	0.002	(0.002)	0.003	(0.002)	0.003	(0.002)	0.002	(0.002)
Year of transaction	Included		Included		Included		Included		Included	
Relative deal ratio_log			-0.002**	(0.001)					-0.002**	(0.001)
Payment_Cash					0.003*	(0.001)			0.003*	(0.001)
Industry relatedness							0.005*	(0.002)	0.007**	(0.002)
Richmedia Choice										
Relative deal ratio_log X Richmedia Choice										
Payment_Cash X Richmedia Choice										
Industry relatedness X Richmedia Choice										
Correction for Self-selection (λ)										
n	784		784		784		784		784	
Model *F*	2.63***		3.06***		2.83***		2.72***		3.38***	
Adjusted R^2	0.032		0.043		0.038		0.036		0.055	

Standard errors are in parentheses. †p<.10; *p<.05; **p<.01; ***p<.001

Table 2. Results of OLS regressions predicting cumulative abnormal return on announcement day (Cont'd)

	Model V-I		Model V-II		Model VI-I		Model VI-II	
Intercept	0.017	(0.013)	0.041 **	(0.014)	0.026 *	(0.013)	0.040 **	(0.014)
Number of Analysts following acquirer	-0.005 †	(0.003)	-0.010 **	(0.003)	-0.006 *	(0.003)	-0.009 **	(0.003)
Book to Market ratio	-0.014 **	(0.005)	-0.009 †	(0.005)	-0.013 **	(0.005)	-0.010 *	(0.005)
Acquirer_Market value_log	-0.002	(0.001)	-0.003 *	(0.001)	-0.002	(0.001)	-0.003 *	(0.001)
Acquirer_Profitability	-0.011	(0.013)	-0.012	(0.013)	-0.009	(0.013)	-0.010	(0.013)
Acquirer_Slack	0.004 †	(0.002)	0.003	(0.002)	0.003	(0.002)	0.003	(0.002)
Acquirer_Deal experiences_log	0.001	(0.002)	0.000	(0.002)	0.001	(0.002)	0.001	(0.002)
Acquirer_hightech industry	-0.003	(0.003)	-0.009 **	(0.003)	-0.003	(0.003)	-0.007 *	(0.003)
Acquirer_Industry profitability	-0.044	(0.042)	-0.050	(0.041)	-0.040	(0.041)	-0.045	(0.041)
Target_Public	0.000	(0.003)	-0.002	(0.003)	0.000	(0.003)	-0.002	(0.003)
Target_Foreign	0.002	(0.002)	0.006 *	(0.003)	0.002	(0.002)	0.005	(0.003)
Year of transaction	Included		Included		Included		Included	
Relative deal ratio_log	-0.001 †	(0.001)	-0.010 ***	(0.003)	0.000	(0.001)	-0.006 *	(0.003)
Payment_Cash	0.003 *	(0.001)	0.002 †	(0.001)	0.002	(0.001)	0.002	(0.001)
Industry relatedness	0.007 **	(0.002)	0.008 **	(0.002)	0.007 **	(0.002)	0.008 **	(0.002)
Richmedia Choice	-0.005 †	(0.003)	-0.003	(0.003)	-0.021 ***	(0.006)	-0.015 *	(0.006)
Relative deal ratio_log X Richmedia Choice					-0.005 **	(0.002)	-0.004 *	(0.002)
Payment_Cash X Richmedia Choice								
Industry relatedness X Richmedia Choice								
Correction for Self-selection (λ)			-0.015 **	(0.005)			-0.011 *	(0.005)
n	784		784		784		784	
Model *F*	3.36 ***		3.77 ***		3.78 ***		3.82 ***	
Adjusted R^2	0.057		0.069		0.069		0.073	

Standard errors are in parentheses. † p<.10; * p<.05; ** p<.01; *** p<.001

Table 2. Results of OLS regressions predicting cumulative abnormal return on announcement day (Cont'd)

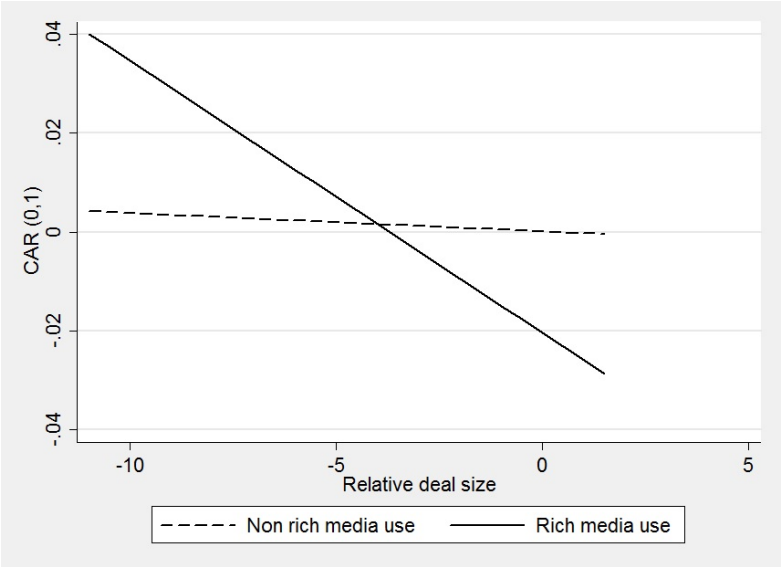
	Model VII-I		Model VII-II		Model VIII-I		Model VIII-II	
Intercept	0.021	(0.014)	0.042 **	(0.015)	0.017	(0.013)	0.041 **	(0.014)
Number of Analysts following acquirer	-0.005 *	(0.003)	-0.010 **	(0.003)	-0.005 †	(0.003)	-0.010 **	(0.003)
Book to Market ratio	-0.014 **	(0.005)	-0.009 †	(0.005)	-0.014 **	(0.005)	-0.009 †	(0.005)
Acquirer_Market value_log	-0.002	(0.001)	-0.003 *	(0.001)	-0.002	(0.001)	-0.003 *	(0.001)
Acquirer_Profitability	-0.010	(0.013)	-0.011	(0.013)	-0.010	(0.013)	-0.012	(0.013)
Acquirer_Slack	0.004	(0.002)	0.003	(0.002)	0.004 †	(0.002)	0.003	(0.002)
Acquirer_Deal experiences_log	0.001	(0.002)	0.000	(0.002)	0.001	(0.002)	0.000	(0.002)
Acquirer_hightech industry	-0.003	(0.003)	-0.009 **	(0.003)	-0.003	(0.003)	-0.009 **	(0.003)
Acquirer_Industry profitability	-0.045	(0.042)	-0.050	(0.041)	-0.044	(0.042)	-0.050	(0.041)
Target_Public	0.000	(0.003)	-0.002	(0.003)	0.000	(0.003)	-0.002	(0.003)
Target_Foreign	0.002	(0.002)	0.005 *	(0.003)	0.002	(0.002)	0.006 *	(0.003)
Year of transaction	Included		Included		Included		Included	
Relative deal ratio_log	-0.001 †	(0.001)	-0.010 ***	(0.003)	-0.001 †	(0.001)	-0.010 ***	(0.003)
Payment_Cash	0.002	(0.002)	0.002	(0.002)	0.003 *	(0.001)	0.002 †	(0.001)
Industry relatedness	0.006 **	(0.002)	0.008 **	(0.002)	0.007 *	(0.003)	0.008 **	(0.003)
Richmedia Choice	-0.013	(0.01)	-0.007	(0.01)	-0.005	(0.005)	-0.003	(0.005)
Relative deal ratio_log X Richmedia Choice								
Payment_Cash X Richmedia Choice	0.002	(0.002)	0.001	(0.002)				
Industry relatedness X Richmedia Choice					-0.001	(0.006)	0.000	(0.005)
Correction for Self-selection (λ)			-0.015 **	(0.005)			-0.015 **	(0.005)
n	784		784		784		784	
Model *F*	3.23 ***		3.60 ***		3.20 ***		3.60 ***	
Adjusted R^2	0.057		0.068		0.056		0.068	

Standard errors are in parentheses. † p<.10; * p<.05; ** p<.01; *** p<.001

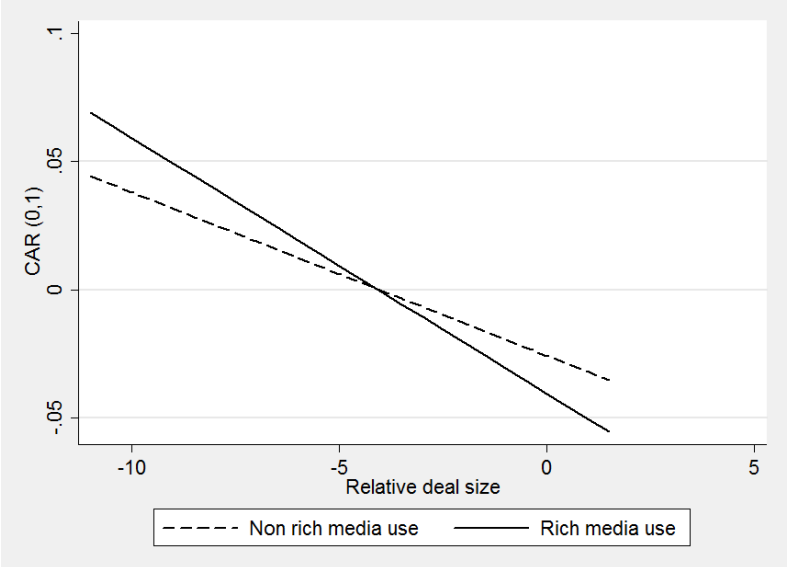
Hypothesis 1a, 1b, and 1c predicts that an acquirer's performance will be associated with deal attributes, such as the relative deal size, cash payment, and industry relatedness between acquirers and targets. Model 0 in table 2 is a controls-only model. Control variables, analyst firm-level scrutiny measured by the number of analysts following acquirers, acquirer slack, and target firm status are marginally significant ($p < .10$). Acquirers' book to market ratio is very significantly associated with an acquirer's cumulative abnormal return ($p < .01$). Models I, II, and III in Table 2 provide strong support for Hypotheses 1a, 1b, and 1c, respectively. Relative deal size is significantly negatively related to the acquirer's cumulative abnormal returns ($p < .001$). Cash payment and industry relatedness are significantly positively associated with the acquirer's cumulative abnormal returns ($p < .05$). Before testing the moderating effect of Rich media choice, Model IV includes all independent variables, relative deal size, cash payment, and industry relatedness. Rich media choice is also added in Model V-I and inverse mill's ratio as correction for self-selection (λ) in Model V-II in order to control for the endogeneity issue of media choice. In Model VI-I, I found that rich media choice as a moderator significantly strengthens the negative effect of Relative deal size on cumulative abnormal return of an acquiring firm ($p < .001$). Model VI-II adds correction for self-selection (λ) to Model VI-I and the moderating effect of rich media use is still significant ($p < .05$). The moderating effect of rich media use is, however, not significant on the relationship between Cash payment and an acquirer's cumulative abnormal return in Model VII-I and on the relationship between Industry relatedness and an acquirer's cumulative abnormal return in Model VIII-I, regardless of inclusion of correction for self-selection (λ).

In order to illustrate the effects predicted by Hypothesis 2a, I plotted the moderating effects of analyst scrutiny on the relationship between negative attribute, large relative deal size,

and acquirers' market performance in Figure 3. Regardless of inclusion of λ in the model, analysts' deal-level scrutiny measured by rich media announcements significantly exacerbates the negative effect of relative deal size on acquirers' cumulative abnormal return on the deal announcement date and the next date.



Model VI-I: OLS model without correction for self-selection (λ)



Model VI-II: OLS model with correction for self-selection (λ)

Figure 3. A moderating effect of analyst scrutiny on the relationship between relative deal size and an acquirer's market performance

Models VI-I and VI-II show that effect size for the interaction between relative deal size and rich media use is 0.013 and 0.005 (when λ is included in the model). It indicates that 1.3% and 0.5% of the variance in CAR is accounted for by the interaction between relative deal size and rich media. This effect size might be considered to be very small. However, there are two reasons why this is not a negligible effect size. First, a moderator, rich media use, is a categorical variable. According to a 30-year review (1969-1998) of the size of moderating effects of categorical variables, the median observed effect size is only 0.002 (Aguinis, Beaty, Boik, & Pierce, 2005). Second, since my sample consists of S&P 500 companies, the effect of just one event attribute on changes in each stock price might be relatively small. However, considering the volume and the price of these stocks, it is not a trivial effect. At the end of June 2015, the total market capitalization of S&P 500 companies was 19.29 trillion dollars. It means that average market capitalization of one firm on the S&P 500 list is 38.58 billion dollars, and even a tiny difference in its CAR generates a non-negligible impact on the stock market.

2. Robustness Tests

I conducted several robustness checks to assess the sensitivity of the test results to changes in event windows for cumulative abnormal return and models. In the OLS test, I calculated cumulative abnormal returns as deal performance from the announcement date to one day after the announcement (two-day window), using the CRSP value-weighted market index for benchmark portfolio. In separate analyses, I tested the same models with five different windows, such as (0, 0), (0, +1), (0, +2), (-1, +1), and (-3, +3). All tests with different windows showed the same results, except the window (0, 0). In the model with the window (0, 0), relative deal size is

the only significant indicator as a main effect, but the interaction effects of rich media use are significant on two main effects, cash payment and relative deal size. I also tested the model for a two-day window (0, +1) with different benchmark portfolios, such as the CRSP equally-weighted market index and the CRSP equally weighted S&P 500 market index. All results with different market indices are the same with the results in the original model. I also ran analyses using multi-level modeling ("xtmixed" command in Stata). This test provided reassurance that the results are robust after controlling for firm-level effects (Appendix B) even though multi-level modeling was not used in this research due to small intra-correlation coefficients from the modeling.

V. DISCUSSION

1. Conclusions

The primary objective of this study is to shed light on a role of analyst scrutiny in M&A announcements and its influence on investors' decision making. In M&A announcements, especially via rich media, top managers intend to communicate with investors to help them to have a shared understanding about the focal deal and reduce perceived insecurity since the M&A event is accompanied by high uncertainty and ambiguity. During this process, analysts actively interact with managers by directly asking deal-related questions or interrogating managers' motivation of M&A in order to provide investors with accurate forecasts and quality analysis reports of the deal. Such analyst scrutiny should be viewed as a monitoring mechanism which would not only reduce agency problems and information asymmetry between managers and investors, but also increase transparency in the information environment around the focal M&A.

While previous literature has described how scrutiny occurs and influences the behaviors of managers or stakeholders at the firm-level (e.g., Rao & Sivakumar, 1999; Farrell & Whidbee, 2002; Gentry & Shen, 2013), this study introduces analyst scrutiny at the event level and highlights how this event-level scrutiny functions as a moderator in the M&A context. I define event-level scrutiny as the analyst scrutiny the focal firm additionally faces over analysts' firm-level scrutiny when it announces a certain event. In this research, I controlled the effect of firm-

level scrutiny in order to show the effects of analyst scrutiny of the focal event, not including the scrutiny of other events or the scrutiny the firm usually experiences. This is because all events do not receive the same degree of attention and each event might be exposed to a different level of scrutiny, depending on event attributes: Some might attract more attention, but others might not. Therefore, one event is associated with certain event-level scrutiny over the firm-level scrutiny.

In M&A announcements, such event-level scrutiny occurs at the deal level. I view the deal announcements using rich media, such as conference calls or webcasts, as occasions when analysts' vigorous deal-specific scrutiny arises. This is because managers are willing to not only provide more deal details and interpretations to reduce the uncertainty and ambiguity underlying M&A announcements, but also offer Q&A time to directly answer to analysts' questions. This opportunity to collect more deal information at low cost and to directly interact with managers encourages analysts to scrutinize a firms' M&A decision, and eventually increases event-level scrutiny of the deal. This study argues that deal-level scrutiny occurring in an acquirer's rich media announcement would strengthen the effect of deal attributes on market response to the announcement. The empirical results, however, only support its moderating effect on the relationship between the negative deal attribute, relative deal size, and an acquirer's financial performance. Analyst deal-level scrutiny did not significantly moderate the relationship between positive deal attributes, cash payment and industry relatedness, and market response. The reason might be that the moderating effect of analyst scrutiny at the deal level is somewhat complicated when a deal includes value-positive attributes. Basically investors are skeptical of a firm's value creation from M&A due to the possibility of agency problems. Despite the positive sides of the deal, therefore, those advantages could be fully enjoyed under the certain conditions. For example, managers should have the capability to properly deliver all positive sides of deals and

to respond well to analysts' severe questioning. Even when analysts dig up and interrogate managers about the details managers might miss or not recognize, managers should be able to lead and keep the conversation as positive as possible. If they fail to manage it, the negative interaction between managers and analysts might offset the good news of value-positive deals. It implies that the effect of conference call use on positive deal announcements might not be easily defined as either a positive effect or a negative effect. Another reason could be the extent of ambiguity underlying the deal-related information, which is expected to be solved during announcements. The effects of industry relatedness or cash payment are relatively obvious, compared to the effect of large target acquisition. Since analysts following an acquirer specialize in the acquirer's industry and have a firm grasp of its cash flow, they might be able to predict the potential advantages and disadvantages of related acquisition or cash payment. In this case, there might not be much information, which would be newly revealed in managers' rich media announcements. A final reason might be related to an impact of other industry attributes on analyst scrutiny about related acquisition. A large firm's acquisition in the same industry usually draws a huge amount of analyst scrutiny as well as regulators' attention. This amount of scrutiny will increase when the acquirer's industry is highly concentrated due to antitrust concerns. On the other hand, the amount of scrutiny that each deal in an acquirer's industry receives might be limited during the period of the frequent occurrence of M&As in the industry (c.f. Benson et al., 2015). These industry attributes which might influence the effect of industry relatedness should be considered as control variables in future research.

Although this study introduces rich media use as a new variable and measurement for the construct, analysts' scrutiny at the event level, by assuming that managers' certain announcement mode might trigger analyst scrutiny, I also considered another possible measurement for this

construct. Analysts help investors to understand the future value of the firm's strategic decision by presenting accurate forecast in their research (Feldman, Gilson, & Villalonga, 2014). Analysts' reputations and compensations are determined based on the accuracy of their forecasts and recommendations, which depends on the outcomes of analyst scrutiny about the event. From this perspective on analyst event-level scrutiny, I assumed that analysts would provide reports and recommendations as much as they are interested in the focal firms and monitor the event. If they have neither paid attention to nor scrutinized acquirers and their deals, they cannot immediately provide the analysis reports including the event news. Therefore, I collected the data about the number of analyst reports from Thomson One and counted the number of sell-side analyst reports including any information about the deal on the announcement day and one day after the announcement day. When I used this variable, the number of analyst reports, as a proxy of analyst scrutiny, the OLS model shows the same results for industry relatedness and relative deal size: significant moderating impact only on the relative deal size. However, regarding cash payment for the deal, a different result was shown: the main effect of cash payment is positive and the moderating effect of analyst deal-level scrutiny (measured by the number of analyst reports covering each deal) is also significantly positive. This alternative measure of analyst event-level scrutiny suggests that the original measure of event-level scrutiny, rich media use, might be too conservative even though two measures are positively correlated ($p < .001$).

2. Limitations and Future Directions

Before I turn to the implications and contributions of this research, I would like to note three limitations. First, I focused on announcements by U.S. publicly listed firms, in particular S&P 500 companies in order to control for firm visibility or extraordinary attention to the

announcements. To generalize the findings, small or medium sized firms' rich media use and its effects on the market response should be considered in the future study. In that case, how to control the attention effect of the rich media use needs to be dealt with carefully. Otherwise, the capability of rich media to directly interact with analysts can be clouded by the additional attention it brings. Second, this research did not investigate what behavioral cues or specific information is actually delivered through rich media. A firm's announcement using rich media could deliver diverse behavioral cues, such as verbal tones, inflections, emotions, the mood, and the choice of words for communication. During or after the announcement, all information disclosed and cues would broadly and immediately reach all audiences. For Hypothesis 2a, I assumed that negative side of the information would trigger analysts' interrogations and the negative impression from the conversation between managers and analysts might be reinforced by following analysts' questioning like an echo. This mechanism can be examined in future research through content analysis of announcement transcripts. Finally, this research does not consider the effects of intense scrutiny on an individual level such as its effects on managers' cognition and emotion. Scrutiny might lead managers to experience some distraction due to close monitoring and frequent interruptions and questioning (Sutton & Galunic, 1996). When a deal has especially negative characteristics or certain information which a manager might not want to disclose, close monitoring and frequent questioning by analysts could cause emotional burdens or cognitive overload on managers. Due to excessive scrutiny by analysts, managers may face frequent delays in ongoing tasks and be required to put forth additional effort elsewhere, away from the core of business activities (Sutton & Galunic, 1996). This scrutiny effects on individual might also negatively influence the announcement itself and destroy a firm's value on the announcement date. Therefore, how such a high degree of scrutiny positively or negatively

influences individuals during M&A announcements and M&A performance could be studied in future research.

3. Contributions

This study makes several contributions. First, I highlight analysts' monitoring roles in corporate event announcements and differentiate analyst deal-level scrutiny from firm-level scrutiny. While prior studies observed the firm level scrutiny measured by the number of analysts following focal firms and empirically tested it as a single factor of scrutiny, this study introduced a different angle of analyst scrutiny: at the event level. When firms announce events, they face firm-level scrutiny by analysts which the firms are usually exposed to, and additionally experience deal-level scrutiny regarding the specific deal. With this approach, I advance the theoretical perspective of analyst roles in market participants' information processing about a firm's M&A announcement by exploring how analyst scrutiny of specific deals occurs and influences the transparency of the information environment.

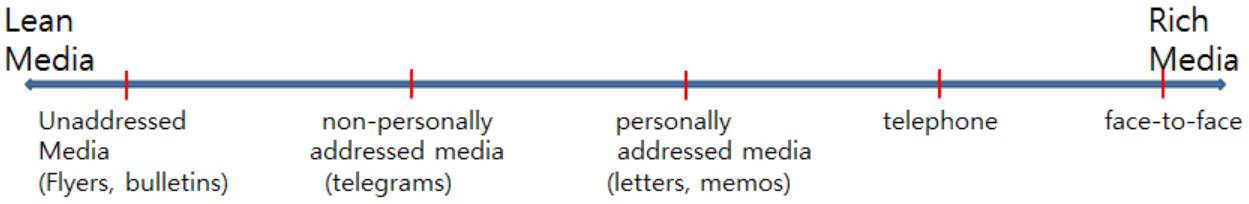
Second, this research proposes that announcement media choice, especially rich media use, could be viewed as a proxy of deal-level scrutiny. Although managers choose announcement media, such as conference calls/ webcasts based on its capacity for effective and efficient communication of an uncertain and ambiguous message, the rich media announcement could also give opportunities for analysts to intensely scrutinize the deal details and acquirer mangers' strategic decision. Media characteristics and the effect of media choice have been studied in the communication field, but those have received less attention in the management literature, even from behavioral strategists. This research raises an intriguing wrinkle in that argument because rich media use could be not only the opportunity for managers to highlight positive news but also

the possibility for managers to be forced to more disclose potentially harmful information than they intended because of analysts' intense scrutiny. Considering this unwelcome effect of rich media use, this research indicates the possible risks that managers might face during announcements via conference calls or webcasts. It also underlines the importance of announcement mode choice as a part of strategic decisions made during M&A, which has been largely neglected in strategic management fields.

For managers who plan for announcements of uncertain and ambiguous events, such as M&A, this research suggests that they should carefully choose the announcement media after considering event details, their capability to manage analysts' questioning, and the possibility of analysts' interrogation because of any negative attributes of the event. Since the effects of rich media vary depending on those factors, all event announcements might not enjoy the same advantages of rich media use. According to the empirical results of this study, while the effects of negative news delivered through rich media were amplified, good news through rich media does not result in additional benefits above its original impacts. In addition, under analysts' severe scrutiny, unprepared or poorly organized announcements using rich media can backfire by disclosing unfavorable news against managers' intention. Therefore, in uncertain and ambiguous situations, how to announce is as important as what to announce.

APPENDIX A

MEDIA RICHNESS THEORY



Media richness theory (Daft & Lengel, 1984, 1986; Daft et al., 1987) argues that messages should be communicated on channels with sufficient and appropriate media richness capacities. According to the theory, media vary in their ability to enable users to communicate and understand. Based on four categories - language variety (the ability to convey natural language rather than just numeric information), multiplicity of cues (the number of ways in which information could be communicated such as verbal tones), personalization (ability to personalize the message), and rapid feedback (Dennis, Fuller, & Valacich, 2008) - channels can be arrayed along a continuum describing their relative richness. Richer media were those with a greater extent in each category. The four categories determine each channel's capacity to carry rich information which is more capable than lean information in terms of reducing equivocality and ambiguity in a message receiver. This continuum was developed to indicate the following

channel classifications in order of decreasing richness: (1) face-to-face, (2) telephone, (3) personally addressed media such as letters and memos, (4) non-personally addressed media such as telegrams, and (5) unaddressed media such as flyers and bulletins (Daft et al., 1987).

Despite the fact that it has been a popular and prominent theory regarding communication media use in organizational settings, media richness theory has also shown the lack of convincing empirical support, particularly for new media, such as voice mail, e-mail, and video conferencing (e.g., Carlson & Zmud, 1999; Fulk & Boyd, 1991; Rice & Shook, 1990; Rice, D' Ambra, & More, 1998). One explanation for the problematic findings is that most studies have tested perceptions of media fit rather than actual effects of media use (Dennis & Kinney, 1998). Dennis and Kinney (1998) found that many studies on media richness theory researched managers' media choices for sending hypothetical messages while the key question of this theory is about whether the rich media uses for equivocal tasks improve the task performance, compared to the lean media uses. Another explanation is there are many factors which could influence media choices, other than media richness (Rice, 1992; Dennis & Valacich, 1999). Previous literature has shown how media choices are affected by, for example, the availability of media to the message sender (Rice & Shook, 1990), socially defined characteristics of media (Fulk, Steinfield, Schmitz, & Power, 1987), and a critical mass of certain media users (Markus, 1987).

Admitting the contradictory results of empirical tests on media richness theory, Dennis and Valacich (1999) developed media synchronicity theory and Dennis, Fuller, and Valacich (2008) expanded and refined the theory that communication performance depends on a fit between communication processes and the level of media synchronicity. According to Dennis and Valacich (1999)'s classification, two primary processes of communication are conveyance

(the dissemination of diverse new information) and convergence (the discussion of preprocessed information regarding each individual's interpretation and conclusion of a situation in order to have a shared meaning). To achieve better communication performance, each process has a need for different media synchronicity, which is influenced by five capabilities, such as symbol sets, parallelism, transmission velocity, rehearsability, and reprocessability. Dennis, Fuller, and Valacich (2008) proposed that either use of high synchronicity media for convergence process or use of low synchronicity media for conveyance process would result in better communication performance.

The initial continuum used in this study indicated four channel classifications: no media used for the announcement, only news releases (written documents), conference calls (audio), and webcasts (video). However, this study finally decided to include only two categories, only news release group and conference calls/webcasts group since almost all firms used at least news releases for the deal announcements (less than 1% of deals did not release any news articles about the deal), and most of webcasts had same formats with conference calls (audio only) except the fact that those were uploaded on the firm's website. Therefore, lean media in this research means news releases and rich media indicates conference calls and webcasts.

APPENDIX B

RESULTS OF MULTI-LEVEL MODELING

Given the multi-level feature of my dataset, I tested a multilevel model of analyst scrutiny effect on market response. However, intra-class correlation coefficients (ICC), a measurement of how much correlation exists in a hierarchical dataset, were very low in all three possible types of multilevel models: deal level and firm level as a two-level model, deal level and industry level as a two-level model, and deal level, firm level and industry level as a three-level model. Before any predictors were included in these multilevel models, the ICCs from two level models are 0.078 (deal level and firm level) and 0.0036 (deal level and industry level). The ICCs from three level model (deal nested within firm nested within industry level) are $7.41e\text{-}^{19}$ (at the industry level) and 0.078 (at the firm level). Based on these low ICCs, it is assumed that the dependent variable, an acquirer's cumulative abnormal return at the deal level, does not differ across the firm-level or across the industry level. The results from other models including independent variables and a moderator also indicate low ICCs. Due to these low ICCs, the appropriateness of statistical analysis for multi-level modeling is not supported in this research. The following table shows the results of the multilevel models including deal and firm level as two-level, which shows the highest ICCs among three possible models.

Results of multi-level modeling predicting cumulative abnormal return

	DV only		Model 0		Model I	
Intercept	-0.001	(0.001)	0.030*	(0.012)	0.033†	(0.012)
Number of Analysts following acquirer			-0.005†	(0.003)	-0.006†	(0.003)
Book to Market ratio			-0.015**	(0.005)	-0.015**	(0.005)
Acquirer_Market value_log			-0.001	(0.001)	-0.002	(0.001)
Acquirer_Profitability			-0.001	(0.013)	-0.003	(0.013)
Acquirer_Slack			0.004	(0.002)	0.003	(0.002)
Acquirer_Deal experiences_log			0.002	(0.002)	0.001	(0.002)
Acquirer_hightech industry			-0.002	(0.003)	-0.003	(0.003)
Acquirer_Industry profitability			-0.050	(0.044)	-0.046	(0.043)
Target_Public			-0.004†	(0.002)	-0.001	(0.003)
Target_Foreign			0.003	(0.002)	0.003	(0.002)
Year of transaction			Included		Included	
Relative deal ratio_log					-0.002**	(0.001)
Payment_Cash						
Industry relatedness						
Richmedia Choice						
Relative deal ratio_log X Richmedia Choice						
Payment_Cash X Richmedia Choice						
Industry relatedness X Richmedia Choice						
Correction for Self-selection (λ)						
n	784		784		784	
Wald $\chi 2$ statistics			42.19***		52.44***	
ICC at the firm level	0.078		0.065		0.066	

Standard errors are in parentheses.† p<.10; * p<.05; ** p<.01; *** p<.001

Results of multi-level modeling predicting cumulative abnormal return (Cont'd)

	Model II		Model III		Model IV	
Intercept	0.015	(0.014)	0.028*	(0.012)	0.016	(0.014)
Number of Analysts following acquirer	-0.005	(0.003)	-0.006†	(0.003)	-0.006†	(0.003)
Book to Market ratio	-0.015**	(0.005)	-0.015**	(0.005)	-0.015**	(0.005)
Acquirer_Market value_log	-0.001	(0.001)	-0.001	(0.001)	-0.002	(0.001)
Acquirer_Profitability	-0.003	(0.013)	-0.001	(0.013)	-0.005	(0.013)
Acquirer_Slack	0.004	(0.002)	0.004	(0.002)	0.003	(0.002)
Acquirer_Deal experiences_log	0.001	(0.002)	0.002	(0.002)	0.001	(0.002)
Acquirer_hightech industry	-0.002	(0.003)	-0.003	(0.003)	-0.004	(0.003)
Acquirer_Industry profitability	-0.055	(0.044)	-0.052	(0.043)	-0.053	(0.043)
Target_Public	-0.004†	(0.002)	-0.005†	(0.002)	-0.001	(0.003)
Target_Foreign	0.003	(0.002)	0.003	(0.002)	0.002	(0.002)
Year of transaction	Included		Included		Included	
Relative deal ratio_log					-0.002**	(0.001)
Payment_Cash	0.003*	(0.001)			0.003*	(0.001)
Industry relatedness			0.005*	(0.002)	0.007**	(0.002)
Richmedia Choice						
Relative deal ratio_log X Richmedia Choice						
Payment_Cash X Richmedia Choice						
Industry relatedness X Richmedia Choice						
Correction for Self-selection (λ)						
n	784		784		784	
Wald $\chi 2$ statistics	48.82***		46.4***		65.47***	
ICC at the firm level	0.074		0.062		0.069	

Standard errors are in parentheses. † p<.10; * p<.05; ** p<.01; *** p<.001

Results of multi-level modeling predicting cumulative abnormal return (Cont'd)

	Model V-I		Model V-II		Model VI-I	
Intercept	0.018	(0.014)	0.043 **	(0.015)	0.027 *	(0.014)
Number of Analysts following acquirer	-0.005 †	(0.003)	-0.011 **	(0.003)	-0.006 *	(0.003)
Book to Market ratio	-0.015 **	(0.005)	-0.010 *	(0.005)	-0.014 **	(0.005)
Acquirer_Market value_log	-0.002	(0.001)	-0.004 *	(0.001)	-0.002	(0.001)
Acquirer_Profitability	-0.005	(0.013)	-0.005	(0.013)	-0.004	(0.013)
Acquirer_Slack	0.004	(0.002)	0.002	(0.002)	0.003	(0.002)
Acquirer_Deal experiences_log	0.001	(0.002)	0.001	(0.002)	0.002	(0.002)
Acquirer_hightech industry	-0.003	(0.003)	-0.009 **	(0.003)	-0.003	(0.003)
Acquirer_Industry profitability	-0.049	(0.043)	-0.055	(0.043)	-0.044	(0.043)
Target_Public	0.000	(0.003)	-0.003	(0.003)	0.000	(0.003)
Target_Foreign	0.002	(0.002)	0.006 *	(0.003)	0.002	(0.002)
Year of transaction	Included		Included		Included	
Relative deal ratio_log	-0.001 †	(0.001)	-0.010 ***	(0.003)	0.000	(0.001)
Payment_Cash	0.003 *	(0.001)	0.002 †	(0.001)	0.002 †	(0.001)
Industry relatedness	0.007 **	(0.002)	0.008 **	(0.002)	0.007 **	(0.002)
Richmedia Choice	-0.006 †	(0.003)	-0.004	(0.003)	-0.021 ***	(0.005)
Relative deal ratio_log X Richmedia Choice					-0.005 **	(0.002)
Payment_Cash X Richmedia Choice						
Industry relatedness X Richmedia Choice						
Correction for Self-selection (λ)			-0.016 **	(0.005)		
n	784		784		784	
Wald $\chi 2$ statistics	69.06 ***		81.74 ***		81.34 ***	
ICC at the firm level	0.073		0.079		0.070	

Standard errors are in parentheses. † p<.10; * p<.05; ** p<.01; *** p<.001

Results of multi-level modeling predicting cumulative abnormal return (Cont'd)

	Model VI-II		Model VII-I		Model VII-II	
Intercept	0.042**	(0.015)	0.022	(0.014)	0.044**	(0.016)
Number of Analysts following acquirer	-0.009**	(0.003)	-0.005†	(0.003)	-0.010**	(0.003)
Book to Market ratio	-0.011*	(0.005)	-0.015**	(0.005)	-0.010*	(0.005)
Acquirer_Market value_log	-0.003*	(0.001)	-0.002	(0.001)	-0.003*	(0.001)
Acquirer_Profitability	-0.005	(0.013)	-0.004	(0.013)	-0.005	(0.013)
Acquirer_Slack	0.003	(0.002)	0.003	(0.002)	0.002	(0.002)
Acquirer_Deal experiences_log	0.001	(0.002)	0.001	(0.002)	0.001	(0.002)
Acquirer_hightech industry	-0.007*	(0.003)	-0.003	(0.003)	-0.009**	(0.003)
Acquirer_Industry profitability	-0.050	(0.043)	-0.050	(0.043)	-0.055	(0.043)
Target_Public	-0.002	(0.003)	0.000	(0.003)	-0.002	(0.003)
Target_Foreign	0.005†	(0.003)	0.002	(0.002)	0.006*	(0.003)
Year of transaction	Included		Included		Included	
Relative deal ratio_log	-0.007*	(0.003)	-0.001†	(0.001)	-0.010***	(0.003)
Payment_Cash	0.002†	(0.001)	0.002	(0.002)	0.002	(0.002)
Industry relatedness	0.008**	(0.002)	0.007**	(0.002)	0.008**	(0.002)
Richmedia Choice	-0.015*	(0.006)	-0.014	(0.010)	-0.007	(0.01)
Relative deal ratio_log X Richmedia Choice	-0.003*	(0.002)				
Payment_Cash X Richmedia Choice			0.002	(0.002)	0.001	(0.002)
Industry relatedness X Richmedia Choice						
Correction for Self-selection (λ)	-0.011*	(0.005)			-0.016**	(0.005)
n	784		784		784	
Wald $\chi 2$ statistics	86.31***		69.83***		81.92***	
ICC at the firm level	0.072		0.0739		0.0786	

Standard errors are in parentheses.† p<.10; * p<.05; ** p<.01; *** p<.001

Results of multi-level modeling predicting cumulative abnormal return (Cont'd)

	Model VIII-I		Model VIII-II	
Intercept	0.018	(0.014)	0.043**	(0.015)
Number of Analysts following acquirer	-0.005†	(0.003)	-0.011**	(0.003)
Book to Market ratio	-0.015**	(0.005)	-0.010*	(0.005)
Acquirer_Market value_log	-0.002	(0.001)	-0.004*	(0.001)
Acquirer_Profitability	-0.005	(0.013)	-0.005	(0.013)
Acquirer_Slack	0.004	(0.002)	0.002	(0.002)
Acquirer_Deal experiences_log	0.001	(0.002)	0.001	(0.002)
Acquirer_hightech industry	-0.003	(0.003)	-0.009**	(0.003)
Acquirer_Industry profitability	-0.049	(0.043)	-0.055	(0.043)
Target_Public	0.000	(0.003)	-0.003	(0.003)
Target_Foreign	0.002	(0.002)	0.006*	(0.003)
Year of transaction	Included		Included	
Relative deal ratio_log	-0.001†	(0.001)	-0.010***	(0.003)
Payment_Cash	0.003*	(0.001)	0.002	(0.001)
Industry relatedness	0.007*	(0.003)	0.009**	(0.003)
Richmedia Choice	-0.005	(0.005)	-0.003	(0.005)
Relative deal ratio_log X Richmedia Choice				
Payment_Cash X Richmedia Choice				
Industry relatedness X Richmedia Choice	-0.001	(0.005)	-0.000	(0.005)
Correction for Self-selection (λ)			-0.016**	(0.005)
n	784		784	
Wald $\chi 2$ statistics	69.08***		81.75***	
ICC at the firm level	0.073		0.079	

Standard errors are in parentheses. † p<.10; * p<.05; ** p<.01; *** p<.001

APPENDIX C

PROBIT ESTIMATION RESULTS FOR DETERMINANTS OF MANAGERS' RICH MEDIA CHOICE FOR M&A ANNOUNCEMENTS

I referred to Kimbrough and Louis (2011) to build this probit model. Considering the attributes of my sample construction, large firm size and missing values, however, this paper has changed the measurements for three variables, method of payment, private target and industry relatedness, to percentage of cash payment, public target, and comparison of the four-digit SIC codes of the six main business lines (by sales) that the acquirer and target operate in. With these measurements, Pseudo R^2 of my probit model is 40.68%, indicating better model fit, compared to Kimbrough and Louis (2011)'s 22.15% of Pseudo R^2.

$$RICH\ MEDIA\ CHOICE_i = \alpha_0 + \alpha_1 PAYMENT\_CASH_i + \alpha_2 RELATIVE\ DEAL\ SIZE_i + \alpha_3 INDUSTRY\ RELATEDNESS_i + \alpha_4 TARGET\_\ PUBLIC_i + \alpha_5 TARGET\_\ FOREIGN_i + \alpha_6 ACQUIRER\_MARKET\ VALUE_i + \alpha_7 BOOK\ TO\ MARKET\ RATIO_i + \alpha_8 ACQUIRER\_NUMBER\ OF\ ANALYSTS_i + \alpha_9 ACQUIRER\_ISTITUTIONAL\ OWNERSHIP_i + \alpha_{10} ACQUIRER\_REGULATED\ INDUSTRY_i + \alpha_{11} ACQUIRER\_HIGHTECH\ INDUSTRY_i + \alpha_{12} EARNINGS\ ANNOUNCEMENT + yearly\ fixed\ effects + \varepsilon_i$$

Probit Estimation: rich media use for M&A announcement		
INTERCEPT	-0.979***	(0.215)
Deal Characteritics		
PAYMENT_CASH_LN	-0.015	(0.065)
RELATIVE DEAL SIZE_LN	0.691***	(0.053)
INDUSTRY RELATEDNESS	-0.146	(0.139)
Target characteristics		
TARGET_ PUBLIC	0.259†	(0.140)
TARGET_ FOREIGN	-0.311*	(0.147)
Acquirer Characteristics		
ACQUIRER_MARKET VALUE_LN	0.187**	(0.070)
BOOK TO MARKET RATIO	-0.274	(0.256)
ACQUIRER_NUMBER OF ANALYSTS_LN	0.396*	(0.156)
ACQUIRER_ISTITUTIONAL OWNERSHIP	-0.120	(0.571)
ACQUIRER_REGULATED INDUSTRY	-0.794**	(0.281)
ACQUIRER_HIGHTECH INDUSTRY	0.418**	(0.139)
EARNINGS ANNOUNCEMENT	-0.002	(0.390)
Year_Fixed Effect	Included	
N	785	
Pseudo R^2	40.68%	

Standard errors are in parentheses. † p<.10; * p<.05; ** p<.01; *** p<.001
ANALYSTS_LN PAYMENT_CASH_LN, RELATIVE DEAL SIZE_LN, ACQUIRER_MARKET VALUE_LN, and ACQUIRER_NUMBER OF ANALYSTS_LN are used in the form of the log of original value.
All continuous variables are mean-centered.

BIBLIOGRAPHY

Abrahamson, E., & Park, C. 1994. Concealment of negative organizational outcomes: An agency theory perspective. ***Academy of Management Journal***, 37(5): 1302-1334.

Aguinis, H., Beaty, J. C., Boik, R. J., & Pierce, C. A. 2005. Effect size and power in assessing moderating effects of categorical variables using multiple regression: a 30-year review. ***Journal of Applied Psychology***, 90(1): 94.

Ahuja, G. & Katila, R. 2001. Technological acquisitions and the innovation performance of acquiring firms: A longitudinal study. ***Strategic management journal***, 22(3): 197-220.

Amihud, Y. & Lev, B. 1981. Risk reduction as a managerial motive for conglomerate mergers. ***The bell journal of economics***, 12(2): 605-617.

Baker, H. K., Powell, G. E., & Weaver, D. G. 1999. Does NYSE listing affect firm visibility? ***Financial Management***, 28(2): 46-54.

Bansal, P. 2005. Evolving sustainably: a longitudinal study of corporate sustainable development. ***Strategic management journal***, 26(3): 197-218.

Benner, M. J. 2010. Securities analysts and incumbent response to radical technological change: Evidence from digital photography and internet telephony. ***Organization Science***, 21(1): 42-62.

Benner, M. J. & Ranganathan, R. 2012. Offsetting illegitimacy? How pressures from securities analysts influence incumbents in the face of new technologies. ***Academy of Management Journal***, 55(1): 213-233.

Benson, D. F., Brau, J. C., Cicon, J., & Ferris, S. P. 2015. Strategically camouflaged corporate governance in IPOs: Entrepreneurial masking and impression management. ***Journal of Business Venturing***.

Bettis, R. A., & Hall, W. K. 1982. Diversification strategy, accounting determined risk, and accounting determined return. ***Academy of Management Journal***, 25(2): 254-264.

Bhagat, S., Dong, M., Hirshleifer, D., & Noah, R. 2005. Do tender offers create value? New methods and evidence. ***Journal of Financial Economics***, 76(1): 3-60.

Boubakri, N., & Bouslimi, L. 2010. Analyst following of privatized firms around the world: The role of institutions and ownership structure. ***The International Journal of Accounting***, 45(4): 413-442.

Bowen, R. M., Davis, A. K., & Matsumoto, D. A. 2002. Do conference calls affect analysts' forecasts? ***The Accounting Review***, 77(2): 285-316.

Brown, D. T. & Ryngaert, M. D. 1991. The mode of acquisition in takeovers: Taxes and asymmetric information. ***The Journal of Finance***, 46(2): 653-669.

Brown, S., Hillegeist, S. A., & Lo, K. 2004. Conference calls and information asymmetry. ***Journal of Accounting and Economics***, 37(3): 343-366.

Bruner, R. F. 2002. Does M&A pay? A survey of evidence for the decision-maker. ***Journal of Applied Finance***, 12(1): 48-68.

Bruner, R. F. 2004. ***Applied mergers and acquisitions***: John Wiley & Sons.

Capron, L. 1999. The long-term performance of horizontal acquisitions. ***Strategic Management Journal***, 20(11): 987-1018.

Capron, L., Mitchell, W., & Swaminathan, A. 2001. Asset divestiture following horizontal acquisitions: A dynamic view. ***Strategic management journal***, 22(9): 817-844.

Carlson, J. R., & Zmud, R. W. 1999. Channel expansion theory and the experiential nature of media richness perceptions. ***Academy of Management Journal***: 153-170.

Cartwright, S., & Schoenberg, R. 2006. Thirty years of mergers and acquisitions research: Recent advances and future opportunities. ***British Journal of Management***, 17(S1): S1-S5.

Chang, S. 1998. Takeovers of privately held targets, methods of payment, and bidder returns. ***The Journal of Finance***, 53(2): 773-784.

Covrig, V., Lau, S. T., & Ng, L. 2006. Do domestic and foreign fund managers have similar preferences for stock characteristics? A cross-country analysis. ***Journal of International Business Studies***, 37(3): 407-429.

Daft, R. L., & Lengel, R. H. 1984. Information richness: A new approach to manager behavior and organization design. In B. Staw & L. L. Cummings (Eds.), ***Research in organizational behavior***, 6: 191-233. Greenwich, CT: JAI Press.

Daft, R. L., & Lengel, R. H. 1986. Organizational information requirements, media richness and structural design. ***Management Science***, 32(5): 554-571.

Daft, R. L., Lengel, R. H., & Trevino, L. K. 1987. Message equivocality, media selection, and manager performance: Implications for information systems. ***MIS quarterly***, 11(3): 355-366.

Das, S., Guo, R. J., & Zhang, H. 2006. Analysts' selective coverage and subsequent performance of newly public firms. ***The Journal of Finance***, 61(3): 1159-1185.

De Bondt, W. F. & Forbes, W. P. 1999. Herding in analyst earnings forecasts: evidence from the United Kingdom. ***European Financial Management***, 5(2): 143-163.

Dean, T. J., & Brown, R. L. 1995. Pollution regulation as a barrier to new firm entry: Initial evidence and implications for future research. ***Academy of Management Journal***, 38(1): 288-303.

Dennis, A. R., Fuller, R. M., & Valacich, J. S. 2008. Media, tasks, and communication processes: A theory of media synchronicity. ***MIS quarterly***, 32(3): 575-600.

Dennis, A. R., & Kinney, S. T. 1998. Testing media richness theory in the new media: The effects of cues, feedback, and task equivocality. ***Information systems research***, 9(3): 256-274.

Dennis, A. R., & Valacich, J. S. 1999. ***Rethinking media richness: Towards a theory of media synchronicity***. Paper presented at the 32nd Hawaii International Conference on System Sciences, Los Alamitos, CA

DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. ***American Sociological Review***, 48(2): 147–160.

Fama, E. F., & Jensen, M. C. 1983. Separation of ownership and control. ***Journal of law and economics***, 26(2): 301-325.

Farrell, K. A. & Whidbee, D. A. 2002. Monitoring by the financial press and forced CEO turnover. ***Journal of Banking & Finance***, 26(12): 2249-2276.

Farrell, K. A., & Whidbee, D. A. 2003. Impact of firm performance expectations on CEO turnover and replacement decisions. ***Journal of accounting and economics***, 36(1): 165-196.

Feldman, E. R., Gilson, S. C., & Villalonga, B. 2014. Do analysts add value when they most can? Evidence from corporate spin-offs. ***Strategic Management Journal***, 35(10): 1446-1463.

Fombrun, C. J., Gardberg, N. A., & Barnett, M. L. 2000. Opportunity platforms and safety nets: Corporate citizenship and reputational risk. ***Business and society review***, 105(1): 85-106.

Fulk, J., & Boyd, B. 1991. Emerging theories of communication in organizations. ***Journal of Management***, 17(2): 407-446.

Fulk, J., Steinfield, C. W., Schmitz, J., & Power, J. G. 1987. A social information processing model of media use in organizations. ***Communication research***, 14(5): 529-552.

Fuller, K., Netter, J., & Stegemoller, M. 2002. What do returns to acquiring firms tell us? Evidence from firms that make many acquisitions. ***The Journal of Finance***, 57(4): 1763-1793.

Gaur, A. S., Malhotra, S., & Zhu, P. 2013. Acquisition announcements and stock market valuations of acquiring firms' rivals: A test of the growth probability hypothesis in China. ***Strategic management journal***, 34(2): 215-232.

Gentry, R. J., & Shen, W. 2013. The impacts of performance relative to analyst forecasts and analyst coverage on firm R&D intensity. ***Strategic management journal***, 34(1): 121-130.

Grimpe, C. & Hussinger, K. 2014. Resource complementarity and value capture in firm acquisitions: The role of intellectual property rights. ***Strategic Management Journal***, 35(12): 1762-1780.

Gubbi, S. R., Aulakh, P. S., Ray, S., Sarkar, M., & Chittoor, R. 2010. Do international acquisitions by emerging-economy firms create shareholder value? The case of Indian firms. ***Journal of International Business Studies***, 41(3): 397-418.

Haleblian, J., Devers, C. E., McNamara, G., Carpenter, M. A., & Davison, R. B. 2009. Taking stock of what we know about mergers and acquisitions: A review and research agenda. ***Journal of Management***, 35(3): 469-502.

Haleblian, J. & Finkelstein, S. 1999. The influence of organizational acquisition experience on acquisition performance: A behavioral learning perspective. ***Administrative Science Quarterly***, 44(1): 29-56.

Hambrick, D. C., & Cannella, A. A. 1993. Relative standing: A framework for understanding departures of acquired executives. ***Academy of Management journal***, 36(4): 733-762.

Haspeslagh, P. C., & Jemison, D. B. 1991. ***Managing acquisitions: Creating value through corporate renewal***. New York: Free Press.

Hayward, M. L. A., & Hambrick, D. C. 1997. Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. ***Administrative Science Quarterly***, 45(1): 103-127.

Hayward, M. L. & Shimizu, K. 2006. De-commitment to losing strategic action: evidence from the divestiture of poorly performing acquisitions. ***Strategic Management Journal***, 27(6): 541-557.

He, L. 2008. Do founders matter? A study of executive compensation, governance structure and firm performance. ***Journal of Business Venturing***, 23(3): 257-279.

Heckman, J. J. 1979. Sample selection bias as a specification error. ***Econometrica: Journal of the econometric society***, 47(1): 153-161.

Hitt, M., Harrison, J., Ireland, R. D., & Best, A. 1998. Attributes of successful and unsuccessful acquisitions of US firms. ***British Journal of Management***, 9(2): 91-114.

Hitt, M. A., Harrison, J. S., & Ireland, R. D. 2001. ***Mergers & acquisitions: A guide to creating value for stakeholders***: Oxford University Press, USA.

Hollander, S., Pronk, M., & Roelofsen, E. 2010. Does silence speak? An empirical analysis of disclosure choices during conference calls. ***Journal of Accounting Research***, 48(3): 531-563.

Homburg, C. & Bucerius, M. 2006. Is speed of integration really a success factor of mergers and acquisitions? An analysis of the role of internal and external relatedness. ***Strategic management journal***, 27(4): 347-367.

Kale, P., Dyer, J. H., & Singh, H. 2002. Alliance capability, stock market response, and long-term alliance success: the role of the alliance function. ***Strategic Management Journal***, 23(8): 747-767.

Kim, C. & Pantzalis, C. 2003. Global/industrial diversification and analyst herding. ***Financial Analysts Journal***: 69-79.

Kimbrough, M. D., & Louis, H. 2011. Voluntary disclosure to influence investor reactions to merger announcements: an examination of conference calls. ***The Accounting Review***, 86(2): 637-667.

King, D. R., Dalton, D. R., Daily, C. M., & Covin, J. G. 2004. Meta-analyses of post-acquisition performance: Indications of unidentified moderators. ***Strategic Management Journal***, 25(2): 187-200.

Kroll, M., Wright, P., Toombs, L., & Leavell, H. 1997. Form of control: A critical determinant of acquisition performance and CEO rewards. ***Strategic Management Journal***, 18(2): 85-96.

Kroll, M., Walters, B. A., & Wright, P. 2008. Board vigilance, director experience, and corporate outcomes. ***Strategic Management Journal***, 29(4): 363-382.

Kusewitt, J. B. 1985. An exploratory study of strategic acquisition factors relating to performance. ***Strategic Management Journal***, 6(2): 151-169.

Laamanen, T. & Keil, T. 2008. Performance of serial acquirers: Toward an acquisition program perspective. ***Strategic Management Journal***, 29(6): 663-672.

Laamanen, T., Brauer, M., & Junna, O. 2014. Performance of acquirers of divested assets: evidence from the US software industry. ***Strategic Management Journal***, 35(6): 914-925.

Lang, M. H., Lins, K. V., & Miller, D. P. 2003. ADRs, analysts, and accuracy: Does cross listing in the United States improve a firm's information environment and increase market value? ***Journal of Accounting Research***, 41(2): 317-345.

Lang, M. H., Lins, K. V., & Miller, D. P. 2004. Concentrated control, analyst following, and valuation: Do analysts matter most when investors are protected least? ***Journal of Accounting Research***, 42(3): 589-623.

Lang, L. H. P., Stulz, R. M., & Walkling, R. A. 1989. Managerial performance, Tobin's Q, and the gains from successful tender offers. ***Journal of Financial Economics***, 24(1): 137-154.

Lang, L. H. P., Stulz, R. M., & Walkling, R. A. 1991. A test of the free cash flow hypothesis: The case of bidder returns. ***Journal of Financial Economics***, 29(2): 315-335.

Langberg, N., & Sivaramakrishnan, K. 2008. Voluntary disclosures and information production by analysts. ***Journal of Accounting and Economics***, 46(1): 78-100.

Langberg, N., & Sivaramakrishnan, K. 2010. Voluntary disclosures and analyst feedback. ***Journal of Accounting Research***, 48(3): 603-646.

Lee, P. M., & James, E. H. 2007. She'-e-os: gender effects and investor reactions to the announcements of top executive appointments. ***Strategic Management Journal***, 28(3): 227-241.

Lee, Y. J., Petroni, K. R., & Shen, M. 2006. Cherry Picking, Disclosure Quality, and Comprehensive Income Reporting Choices: The Case of Property-Liability Insurers. ***Contemporary Accounting Research***, 23(3): 655-692.

Lee, H., Smith, K. G., Grimm, C. M., & Schomburg, A. 2000. Timing, order and durability of new product advantages with imitation. ***Strategic Management Journal***, 21(1): 23-30.

Lubatkin, M. 1983. Mergers and the Performance of the Acquiring Firm. ***Academy of Management Review***, 8(2): 218-225.

Luo, X., Wang, H., Raithel, S., & Zheng, Q. 2015. Corporate social performance, analyst stock recommendations, and firm future returns. ***Strategic Management Journal***, 36(1): 123-136.

Madhavan, R., & Prescott, J. E. 1995. Market value impact of joint ventures: The effect of industry information-processing load. ***Academy of Management Journal***, 38(3): 900-915.

Makri, M., Hitt, M. A., & Lane, P. J. 2010. Complementary technologies, knowledge relatedness, and invention outcomes in high technology mergers and acquisitions. ***Strategic Management Journal***, 31(6): 602-628.

Markus, M. L. 1987. Toward a "critical mass" theory of interactive media universal access, interdependence and diffusion. ***Communication research***, 14(5): 491-511.

Mayew, W. J., Sharp, N. Y., & Venkatachalam, M. 2013. Using earnings conference calls to identify analysts with superior private information. ***Review of Accounting Studies***, 18(2): 386-413.

Mayew, W. J., & Venkatachalam, M. 2012. The power of voice: Managerial affective states and future firm performance. ***The Journal of Finance***, 67(1): 1-43.

Mcnamara, G. M., Haleblian, J. J., & Dykes, B. J. 2008. The performance implications of participating in an acquisition wave: Early mover advantages, bandwagon effects, and the moderating influence of industry characteristics and acquirer tactics. ***Academy of Management Journal***, 51(1): 113-130.

Meyer, J. W., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. ***American journal of sociology***, 83(2): 340-363.

Meznar, M. B., & Nigh, D. 1995. Buffer or bridge? Environmental and organizational determinants of public affairs activities in American firms. ***Academy of Management Journal***, 38(4): 975-996.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. 2004. Firm size and the gains from acquisitions. ***Journal of Financial Economics***, 73(2): 201-228.

Morck, R., Shleifer, A., & Vishny, R. W. 1990. Do managerial objectives drive bad acquisitions? ***The Journal of Finance***, 45(1): 31-48.

Myers, S. C. & Majluf, N. S. 1984. Corporate financing and investment decisions when firms have information that investors do not have. ***Journal of Financial Economics***, 13(2): 187-221.

Palich, L. E., Cardinal, L. B., & Miller, C. C. 2000. Curvilinearity in the diversification-performance linkage: An examination of over three decades of research. ***Strategic Management Journal***(21): 155-174.

Park, C. 2003. Prior performance characteristics of related and unrelated acquirers. ***Strategic Management Journal***, 24(5): 471-480.

Patell, J. M. 1976. Corporate forecasts of earnings per share and stock price behavior: Empirical test. ***Journal of Accounting Research***, 14(2): 246-276.

Peterson, P. P. 1989. Event studies: A review of issues and methodology. ***Quarterly Journal of Business and Economics***, 28(3): 36-66.

Pfeffer, J. 1973. Size, composition, and function of hospital boards of directors: A study of organization-environment linkage. ***Administrative Science Quarterly***, 18(3): 349-364.

Rao, H., Greve, H. R., & Davis, G. F. 2001. Fool's gold: Social proof in the initiation and abandonment of coverage by Wall Street analysts. ***Administrative Science Quarterly***, 46(3): 502-526.

Rao, H., & Sivakumar, K. 1999. Institutional sources of boundary-spanning structures: The establishment of investor relations departments in the Fortune 500 industrials. ***Organization Science***, 10(1): 27-42.

Rice, R. E. 1992. Task analyzability, use of new media, and effectiveness: A multi-site exploration of media richness. ***Organization Science***, 3(4): 475-500.

Rice, R. E., D'Ambra, J., & More, E. 1998. Cross-cultural comparison of organizational media evaluation and choice. ***Journal of Communication***, 48(3): 3-26.

Rice, R. E., & Shook, D. E. 1990. Relationships of Job Categories and Organizational Levels to Use of Communication Channels, Including Electronic Mail: A Meta-Analysis and Extension. ***Journal of management Studies***, 27(2): 195-229.

Roberts, E. B., & Berry, C. A. 1985. Entering new businesses: selecting strategies for success. ***Sloan Management Review***, 27(3): 3-17.

Roll, R. 1986. The hubris hypothesis of corporate takeovers. ***Journal of Business***, 59(2): 197-216.

Sanders, W. G. 2001. Behavioral responses of CEOs to stock ownership and stock option pay. ***Academy of Management Journal***, 44(3): 477-492.

Scharfstein, D. S. & Stein, J. C. 1990. Herd behavior and investment. ***The American Economic Review***: 465-479.

Seth, A. 1990. Value creation in acquisitions: A re-examination of performance issues. ***Strategic Management Journal***, 11(2): 99-115.

Singh, H., & Montgomery, C. A. 1987. Corporate acquisition strategies and economic performance. ***Strategic Management Journal***, 8(4): 377-386.

Sirower, M. L. 1997. ***The synergy trap: How companies lose the acquisition game***. New York: Free Press.

Sirower, M. L. & Lipin, S. 2003. Investor communications: a message of confidence in the deal. ***MERGERS AND ACQUISITIONS-PHILADELPHIA-***, 38(10): 21-26.

Sutton, R. I., & Galunic, D. C. 1996. Consequences of public scrutiny for leaders and their organizations. In B. M. Staw & L. L. Cummings (Eds.), ***Research in organizational behavior***, vol. 18: 201–250. Greenwich, CT: JAI Press.

Travlos, N. G. 1987. Corporate takeover bids, methods of payment, and bidding firms' stock returns. ***The Journal of Finance***, 42(4): 943-963.

Trevino, L. K., Lengel, R. H., Bodensteiner, W., Gerloff, E. A., & Muir, N. K. 1990. The Richness Imperative and Cognitive Style The Role of Individual Differences in Media Choice Behavior. ***Management Communication Quarterly***, 4(2): 176-197.

Trevino, L. K., Lengel, R. H., & Daft, R. L. 1987. Media symbolism, media richness, and media choice in organizations a symbolic interactionist perspective. ***Communication Research***, 14(5): 553-574.

Uhlenbruck, K., Hitt, M. A., & Semadeni, M. 2006. Market value effects of acquisitions involving Internet firms: A resource-based analysis. ***Strategic Management Journal***, 27(10): 899-913.

Varaiya, N. P., & Ferris, K. R. 1987. Overpaying in corporate takeovers: The winner's curse. ***Financial Analysts Journal***, 43(3): 64-70.

Villalonga, B. & McGahan, A. M. 2005. The choice among acquisitions, alliances, and divestitures. ***Strategic management journal***, 26(13): 1183-1208.

Wang, H., Choi, J., & Li, J. 2008. Too little or too much? Untangling the relationship between corporate philanthropy and firm financial performance. ***Organization Science***, 19(1): 143-159.

Welbourne, T. M., & Andrews, A. O. 1996. Predicting the performance of initial public offerings: should human resource management be in the equation? ***Academy of Management Journal***, 39(4): 891-919.

Welch, I. 2000. Herding among security analysts. ***Journal of Financial Economics***, 58(3): 369-396.

Westphal, J. D. & Graebner, M. E. 2010. A matter of appearances: How corporate leaders manage the impressions of financial analysts about the conduct of their boards. ***Academy of Management Journal***, 53(1): 15-44.

Womack, K. L. 1996. Do brokerage analysts' recommendations have investment value? ***The journal of finance***, 51(1): 137-167.

Wright, P., Kroll, M., & Elenkov, D. 2002. Acquisition Returns, Increase in Firm Size, and Chief Executive Officer Compensation: The Moderating Role of Monitoring. ***Academy of Management Journal***, 45(3): 599-608.

Zuckerman, E. W. 1999. The categorical imperative: Securities analysts and the illegitimacy discount. ***American journal of sociology***, 104(5): 1398-1438.

Zuckerman, E. W. 2000. Focusing the corporate product: Securities analysts and de-diversification. ***Administrative Science Quarterly***, 45(3): 591-619.