JUDGMENT EFFECTS OF FAMILIARITY WITH AN ANALYST'S NAME

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ABSTRACT

In this study, I provide experimental evidence on how familiarity with the analyst's name (induced by prior exposure to the name) influences investors' judgments. I find that in the absence of the performance cue about the analyst, exposure to the analyst's name enhances the perceived analyst credibility, which in turn influences the investors' earnings estimates and investment intentions. The effect of exposure on investors' reactions to the analyst's earnings forecast is less likely in the presence of the performance cue about the analyst (compared to the situation when the performance cue is absent). Furthermore, I show that when the analyst makes a forecast error, investors lower their perceived analyst credibility to a greater extent when the investors have prior exposure to the analyst's name. This effect of exposure is magnified when the analyst makes an optimistic error (actual earnings are lower than the analyst's forecast) relative to a pessimistic error (actual earnings are higher than the analyst's forecast). The results contribute to the accounting literature in that I separate out the effects on investors' judgments of their prior exposure to the analyst's name from their awareness of the prior performance about the analyst. I also show that increased exposure has both benefits and costs: analysts can build their reputation in terms of market perceived credibility by merely getting their names in the media, and they will (not) be punished more when their forecast error is optimistic (pessimistic).

CHAPTER I:

INTRODUCTION

Financial analysts and reports made by analysts receive frequent coverage in the media. In addition to providing earnings-related information (such as analyst's earnings forecast or comments) and analyst-related information (such as the brokerage firm or award status), such media coverage can increase the salience of an analyst's name in investors' minds, and correspondingly, their familiarity (Zajonc 1968). In general too, the media periodically reports both the analysts' name and their prior performance (e.g., *Institutional Investor Magazine* publishes its All-American ranking and *Wall Street Journal* reports the All-Star analyst status every year). In this paper, I investigate how investors' familiarity with the analyst's name, induced by exposure to his/her name, influences investors' judgments.[1]

Familiarity through mere exposure to an analyst's name *per se* is irrelevant to the quality of the analyst's earnings forecast and the company's future performance. Specifically, my first research question relates to whether investors' exposure to the analyst's name influences perceived analyst credibility and investors' own earnings- and investment-related judgments when they receive a press article including the analyst's earnings forecast. I examine this question in a context when no performance cue about the analyst is

[1] I define familiarity with the analyst's name as the perceptual fluency for the name, which refers to the ease with which people perceive, encode and process the name (Jacoby et al. 1989).

provided. Second, I examine whether, in the presence of the performance cue about the analyst, prior exposure to the analyst's name has any incremental effects on investors' judgments on the analyst's credibility. Finally, I investigate the effect of exposure to an analyst's name when the analyst's earnings forecast turns out to be inaccurate, and assess whether the direction of the error (optimistic versus pessimistic) matters. I examine this issue in a context when no performance cue about the analyst is provided.

Investigating whether and how prior exposure to the analyst's name influences investors' judgment is important because analysts who frequently appear in the media may not necessarily be good performers. For instance, in Bonner et al.'s (2007) sample, around 39 (41) percent of analysts have high media exposure but do not have All-American (All-Star) awards (see Table 1). When the analyst's performance is measured by the accuracy of earnings forecast, 25 percent of analysts have high media coverage but are actually low performers.[2] Examination of the effect of exposure in the presence (absence) of the performance cue about the analyst helps to understand how earnings-irrelevant (i.e. exposure) and earnings-relevant (i.e. performance cue) factors interact in influencing investors' judgments. On a practical level, this paper sheds light on how analysts build and maintain their reputations with investors. Specifically, I examine the benefits and costs associated with increased exposure in the media. Analysts can enhance their credibility by increasing their media exposure. The extent to which this positive exposure effect can sustain

[2] I appreciate the help of Beverly Walther in providing this analysis.

depends on the direction of his/her forecast error.

TABLE 1: A 2×2 Frequency Table of Media Coverage and Analyst's Perceived and Actual Performance [a]

Panel A:		Performance[c] [*Institutional Investors* All-American Award]	
		No	Yes
Media Coverage[b]	Low	9407 (46.72%)	701 (3.48%)
	High	7760 (38.54%)	2266 (11.25%)
Panel B:		Performance [*Wall Street Journal* All-Star Award]	
		No	Yes
Media Coverage	Low	9157 (45.48%)	951 (4.72%)
	High	8179 (40.62%)	1847 (9.17%)
Panel C:		Performance [Accuracy]	
		Low	High
Media Coverage	Low	5105 (25.36%)	5003 (24.85%)
	High	4963 (24.65%)	5063 (25.15%)

[a] This frequency table is based on the sample of Bonner et al. (2007) (20,134 analyst-firm-quarter observations) and shows the number of observations (the percentage of observations in the full sample) in each cell.
[b] Media coverage of the analyst is classified as low/high using median split.
[c] Performance of the analyst is measured by her/his award status (*Institutional Investors* All-American award; *Wall Street Journal* All-Star award) and earnings forecast accuracy (low/high using median split).

In a recent study using archival data, Bonner et al. (2007) find that the celebrity status of analysts (measured by the quantity of media coverage analysts receive in the major media sources) positively affects investors' reactions to forecast revisions. They argue that investors easily store in memory information about analysts' media coverage because it is frequency-type information. In this paper, I extend Bonner et al. (2007) by investigating whether and how analysts can use the increased exposure as a strategy to enhance their credibility. Furthermore, I create conditions where investors have

(do not have) the knowledge about the prior performance of the analysts, and examine the joint effects of exposure and performance cue in influencing investors' judgments.[3] This helps to extend the insights first provided in Bonner et al. (2007).

Following exposure theory (Zajonc 1968) which posits that mere exposure to even a normatively irrelevant cue can improve the decision makers' evaluations on the cue, I show that investors' credibility assessments of an analyst improve if they had previously been exposed to the analyst's name. However, prior exposure to an analyst's name and the analyst's prior performance have substitutive effects on investors' credibility assessments: in the absence of prior performance cue, prior exposure to an analyst's name has a positive incremental effect on investors' credibility assessments, but not in its presence. I focus on the perceived analyst credibility (defined as the perceived analysts' competence and trustworthiness, Hovland et al. 1953) because credibility is important for analysts to build their reputation in the profession and enhance their influence on investors. There is limited research about the factors affecting the perceived analyst credibility, with Kadous et al. (2009) being an exception.[4]

Furthermore, I provide evidence that the cognitive process by which prior

[3] I collect some news articles in which the analyst's name is mentioned. As shown in Appendix F, in some cases, no performance indicator information is provided with the analyst's name (Examples 1, 2 and 3), while in other cases, there is performance indicator information accompanying the analyst's name (e.g. Wall-Street Journal All-Star status or star-ratings; see Examples 4 and 5). Therefore, I manipulate these two scenarios as the absence/presence of performance cue conditions in the experiment.

[4] Other studies examine factors which influence manager's reporting credibility, for example, Mercer (2005) and Hirst et al. (2007).

exposure and prior performance influence investors' earnings- and investment-related judgments is via their credibility assessments of the analyst. Finally, I assess the effect of prior exposure to an analyst's name on the perceived analyst credibility after the investor has information on the analyst's actual forecast accuracy. Specifically, I investigate whether the effect of prior exposure to an analyst's name is conditional on the direction of the analyst's forecast error (i.e., whether the analyst had been optimistic versus pessimistic relative to actual earnings).

I conduct an experiment to investigate these issues. First, using the experimental approach enables me to disentangle exposure to the analyst's name from other confounding information such as analyst characteristics and the strength of the analyst's arguments. For example, when the analyst is first mentioned in a press article, his/her name is usually introduced with the brokerage firm which the analyst is employed.[5] Although only the analyst's name is repeated when the person is mentioned later in the article, it is hard to separate whether investors are reacting to the repetition of the analyst's name or the brokerage reputation associated with name. It is also possible that investors

[5] It is noted that the brokerage firm is a more complex construct than the performance cue about the analyst. First, not all analysts in the top brokerage firms are good performers. For example, I collect the performance ratings from Yahoo! Finance about overall earnings estimates accuracy for 52 analysts employed by Citi in 2010. It suggests that only 18 (35 percent) analysts have performed above average in their earnings estimate accuracy (i.e. have 4 or 5 stars). Analysts employed in an average brokerage firm could perform well. For example, among 11 analysts employed by Avondale Partners LLC in 2010, 4 (36 percent) analysts have star ratings in their forecast accuracy above average. Also, Fang and Yasuda (2009) document that only *half* of the All-American analysts in their sample work at the top-tier investment banks (defined as ten underwriters with the highest Carter-Manaster ranks in Carter et al. 1998). Second, if investors have no prior knowledge about the brokerage firm, it is hard for them to infer the analyst's performance from the brokerage firm name. Therefore, I choose to manipulate the presence of a performance cue (a cleaner construct) instead of the brokerage firm.

react more to those highly-exposed analysts' earnings forecasts because those analysts are more confident and provide stronger justifications for their views. Second, in an experimental setting, other factors determining the appearance of analyst's name in the media press can be controlled. The media may selectively report those analysts who are more active, available, influential, or who provide eye-catching news. Therefore, the use of archival data entails the challenge of controlling for this media-selection bias. In addition, the popularity of certain media outlets such as Wall Street Journal and The New York Times may increase the prominence of the news. Finally, the experimental method offers an opportunity to test the cognitive mechanism by which investors react to an earnings forecast provided by a familiar analyst.

I use a three-way (exposure; performance cue; forecast error direction) fractional factorial design in my experiment. Participants are MBA students, and I manipulate the exposure of the analyst's name in stage one of the experiment by first showing all participants twenty slides containing nine names, but where the target analyst's name is mentioned six times in one condition and none in the other condition. Participants are merely shown the names with no other information associated with the names at this stage. The second independent variable is the performance cue about the analyst in the press release. In the second stage of the experiment, participants are told that the analyst is a Wall Street Journal All-Star analyst or they are not given any performance cue. Finally, for the subset of participants in the performance cue absent condition, I hold constant the magnitude of analyst forecast error and

manipulate the analyst's forecast error as either optimistic (actual earnings are lower than the analyst's forecast) or pessimistic (actual earnings are higher than the analyst's forecast). The main dependent variable of interest is investors' perceived analyst credibility. I also examine investors' earnings estimates, investment intentions and willingness to rely on the analyst's future report to measure the economic consequences of perceived analyst credibility.

Results indicate that in the absence of the performance cue about the analyst, investors consider the highly-exposed analyst to be more credible. When the performance cue about the analyst is present, exposure to the analyst's name has no incremental effect on investors' perceived analyst credibility. In addition, I find no difference in perceived analyst credibility when the analyst's name has high prior exposure or is a Wall Street Journal All-Star analyst. The perceived analyst credibility is important because it mediates investors' earnings estimates and investment intentions. Finally, when no performance cue about the analyst is provided, after the actual earnings are announced and the analyst's forecast turns out to be inaccurate, investors punish the highly-exposed analyst by lowering their credibility ratings to a greater extent than the non-exposed analyst. This decline in credibility assessment is magnified when the analyst's forecast error is optimistic (versus pessimistic).

My study contributes to the literature by partitioning the effects of prior exposure to an analyst's name from the performance cue about the analyst, which is difficult to do so in archival studies. As my results indicate that the effects of exposure and performance cue have substitutive effects, these results

suggest that when the analyst name is co-presented with his/her prior performance information (e.g., All-Star status), investors' reactions to the analyst's earnings forecast may be capturing the performance rather than the prior exposure effect. I also extend the literature by showing that the mechanism by which prior exposure to an analyst's name influences investors' earnings- and investment-related judgments is via their assessments of the analyst's credibility. My results show that analysts can enhance their perceived credibility simply by increasing their media exposure frequency, even if it pertains to their names only. For instance, analysts can increase their exposure to the mass media by covering more firms, providing timely forecasts, asking more questions during conference calls and maintaining a good relationship with the media.

However, while an analyst's credibility can be enhanced when investors have prior exposure to his/her name, this prior exposure effect is a two-edged sword when the analyst's forecast turns out to be inaccurate. I show that the analyst's credibility takes a bigger hit when the investor has prior exposure to his/her name, and that this effect is stronger when the analyst commits an optimistic forecast error. This effect occurs because when the analyst's forecast is inaccurate, investors have greater negative affect towards the highly-exposed analyst, and are more likely to attribute external factors for a non-exposed analyst's pessimistic forecast error.

In the next chapter of the paper, I review the related literature and develop the hypotheses. Chapter III describes the research design and experiment

procedure. Chapter IV analyzes the experimental results. Finally, chapter V concludes the paper.

CHAPTER II:

HYPOTHESIS DEVELOPMENT

Effects of Exposure and Performance Cue on Investors' Judgments

Exposure Effect

Zajonc (1968) documents that mere repeated exposure of the individual to a stimulus is a sufficient condition to enhance his/her attitude toward it. Mere exposure refers to a condition in which exposure makes the given stimulus more accessible to the individual perception. Zajonc (1968) manipulates the exposure frequency of nonsense Chinese characters and asks participants to guess their meanings on a good-bad scale. He finds a significantly positive exposure-favorability relationship. Following Zajonc (1968), other psychology studies find that increased exposure results in favorable evaluations of a variety of properties such as liking, goodness, attractiveness, and pleasantness measures (Bornstein 1989). This suggests that credibility assessments will also be likewise positively influenced by prior exposure.

The perceptual fluency/misattribution model offers an explanation for this mere exposure effect (Mandler et al. 1987; Jacoby et al. 1992; Bornstein and

D'Agostino 1994).[6] This model is based on the concept of "perceptual fluency," which refers to the ease with which people perceive, encode and process information. According to this model, repeated exposure to a stimulus results in the formation of a perceptual representation of the stimulus. When people are asked to evaluate the previously-exposed stimulus, the perceptual representation of the stimulus is activated, which facilitates the encoding and processing of the stimulus and enhances the perceptual fluency for that stimulus. Perceptual fluency serves as basis for the feeling of familiarity in the sense that stimulus perceived more quickly tends to be identified as familiar (Johnston et al. 1985). While people often experience fluctuations in their perceptual fluency for (and familiarity with) the stimuli, they generally lack insight into the true cause of such experiences. Thus, they often misattribute the cause of the perceptual fluency to the stimulus' status on the dimension in question. Such misattribution of perceptual fluency to the exposed stimulus produces higher ratings on the stimulus. For example, Mandler et al. (1987) find that when participants are asked to evaluate the stimuli in the particular dimensions (such as preference, brightness or darkness), exposed irregular shapes are perceived as preferred, brighter or darker than the unexposed shapes.

Psychology research suggests that people can automatically encode the frequency information (Zacks et al. 1982) and this process uses a minimal amount of attentional effort (Hasher and Zacks 1979). Prior studies in the

[6] Another explanation for the exposure effect is based on the affective primacy model (Zajonc 1980), which proposes that repeated exposure enhances an automatic positive evaluation of the re-exposed stimulus and a global positive affective state.

auditing and accounting literature have investigated the effects of frequency of exposure to relevant cues. For instance, Butt (1988) finds that for both students and auditors, frequency judgments based on direct experience (by repeated individual presentations of financial statement errors) are the most accurate, and those based on indirect experience (by receiving summary data) are the least accurate. Joe (2003) finds that auditors who receive both the financial statements and a press release of a client's debt default (which is the repeated information that has been disclosed in the financial statements notes earlier) are more likely to perceive a client's bankruptcy probability to be higher than in a situation when there is no press coverage. In an experiment, Hugon (2004) finds that redundancy of financial performance information is positively associated with information credibility. All these studies investigate the effects of repeating decision-relevant information, but not decision-irrelevant information (such as an analyst's name).

Most related to this study is the archival study by Bonner et al. (2007). They define a celebrity as a famous or well-publicized person, being well-known in addition to his/her performance-related qualities (Bonner et al. 2007, 482). They use the quantity of media coverage analysts receive as their empirical proxy for celebrity and measure total media coverage as the number of appearances of an analyst's name associated with his brokerage house employer in all media sources included in the DowJones Interactive (DJI) database, newspapers, magazines, press wires, The Wall Street Journal, television and radio. Bonner et al. (2007) find that investors react more strongly to the

celebrity analysts' revised earnings forecasts. This paper extends Bonner et al. (2007) by examining that whether analysts can use increased exposure as a strategy to form and/or promote their reputation with investors. In addition, I create conditions in which the performance cue is salient (or totally unknown) to investigate the joint effects of exposure and performance cue.

Hugon (2004) manipulates information redundancy by repeating the same pieces of financial information about the positive future earnings in two juxtaposed press articles. He finds that investors perceive redundant information to be more credible and revise their earnings forecasts to a greater extent relative to a situation where no redundant information is provided. [7] My paper differs from Hugon (2004) in that Hugon (2004) focuses on the repetition of earnings-relevant information in multiple media sources. Repetition of the same earnings-relevant information in different media sources can normatively enhance the credibility of the information since the different media sources may have independently verified the news before reporting it. [8] In contrast, I

[7] Hugon (2004) indicates that prior information repetition studies relate to either asymmetrical redundancy or symmetrical redundancy. Asymmetrical redundancy refers to the comparison between "baseline information plus redundant content" condition and "baseline information" condition. In this case, the information redundancy confounds with *the amount of data* (the amount of data in the first condition effectively doubles the amount of data in the latter condition). Symmetrical redundancy involves a comparison between the "baseline information plus redundant content" condition and the "baseline information plus non-redundant content" condition. In this case, although the amount of data is the same, the *amount of information* differs across these two conditions (the amount of information in the first condition is half of the amount of information in the later condition).

[8] This result holds when he compares the *redundant* condition (2 articles, 4 data items per article, 8 data items and 4 information items in total; baseline information plus redundant content) with the *asymmetric non-redundant* condition (2 articles, 2 data items per article, 4 data items and 4 information items in total; baseline information). Hugon (2004) also holds the total pieces of data constant and varies the amount of information contained in the two press articles. He finds that there is no difference in investors' earnings judgment in the *symmetric non-redundant* condition (2 articles, 4 data times per article, 8 data items and 8 information

manipulate the exposure frequency of names, which does not provide earnings- or performance-relevant information.

Based on the mere exposure effect, I expect that the mere prior exposure of the name enhances investors' perceptual fluency for the name. When the name appears in the press release as the source of the earnings forecast, investors will view the person (the analyst) more favorably in terms of credibility, which in turn affects the investors' earnings estimates and investment-related assessments. However, as I explain below, I anticipate that this effect is likely to occur in the absence of any performance cue about the prior performance of the analyst, and less likely to occur when a performance cue accompanies reports containing the analyst's views.

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items in total; baseline information plus non-redundant content) relative to the *redundant* condition.

Joint Effects of Exposure and Performance Cue on Investors' Judgments

Prior research suggests that investors' reactions to analysts' (management) earnings forecasts depend on the analysts' (management) prior forecast accuracy or factors associated with current forecast accuracy (Hirst et al. 1999; Bonner et al. 2003; Clement and Tse 2003). Bonner et al. (2007) find that market reaction to the analyst's forecast revision is stronger when the analyst has high ex post or ex ante accuracy, award status (such as Wall Street Journal All-Star analyst), or greater media coverage. Therefore, I predict that investors' reactions to the analyst's earnings forecast will be stronger when the analyst is known as an All-Star analyst.[9]

Psychology research suggests a non-additive effect of multiple information cues on personal impression (Birnbaum 1974). As discussed previously, one explanation for the mere exposure effect is that people misattribute the perceptual fluency (or familiarity) caused by repeated exposure to the name. This process is not necessarily open to conscious awareness (Jacoby et al. 1992; Bornstein and D'Agostino 1994). Familiarity, as a subjective experience, serves as a non-analytic basis for judgments (Jacoby et al. 1989). In contrast, the award status of the analyst, as an indicator of the analyst's prior performance, is highly associated with source expertise as All-Star analysts provide more accurate earnings forecasts (Stickel 1992; Fang and Yasuda 2009). Previous

[9] I focus on positive performance cue (i.e., the analyst's award status) in this study. The reason is that the analysts and the media are generally reluctant to disclose the performance for bad performers. (for example, Yahoo! Finance only displays the performance ratings for those top performers, i.e. those analysts whose ratings are higher than average.)

research finds that when objective or task-related source characteristics are weak, participants resort to irrelevant cues to make judgments. In contrast, irrelevant cues make little difference in participants' preference when the source is known as an expert (Joseph 1977; Pornpitakpan 2004). When the explicit performance cue about the analyst (the Wall Street Journal All-Star award) is presented along with the analyst's name and is therefore highly accessible to the investors' memory, I expect investors will rely on the performance cue about the analyst's expertise to make their judgments about the perceived analyst credibility. In this case, the mere exposure effect is less likely to occur. In contrast, in the absence of a performance cue, the mere exposure effect is likely to be magnified. My hypotheses are formally stated below.

Hypothesis 1a: When a performance cue about the analyst is absent, prior exposure to an analyst's name will lead investors to perceive the analyst to be more credible, which further influences their associated earnings- and investment-related judgments.

Hypothesis 1b: The effect of prior exposure of an analyst's name on credibility and associated earnings- and investment-related judgments is less likely when a performance cue about the analyst is present (compared to the situation when the performance cue is absent).

Figure 1 depicts the conceptual model associated with Hypotheses 1a and1b, while Figure 2 provides a graphical summary.

FIGURE 1: Construct and Operationalization of Hypotheses 1a and 1b

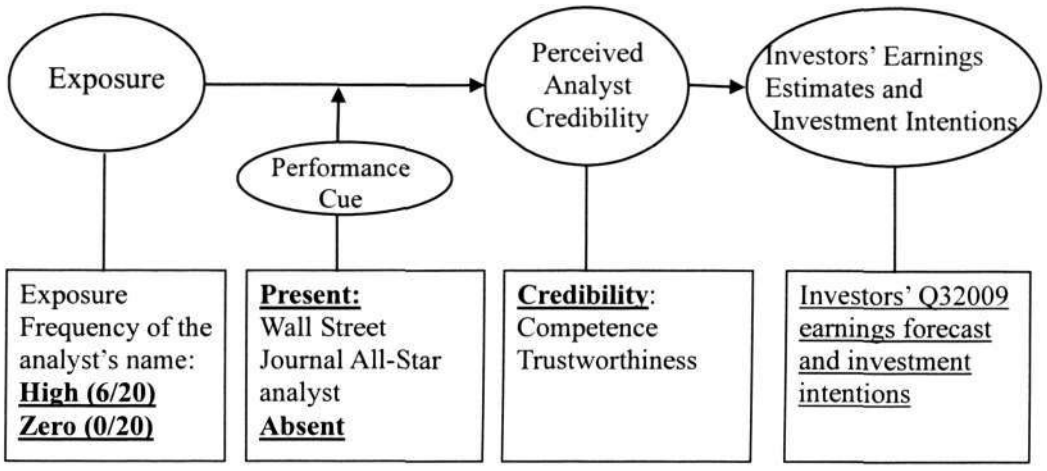
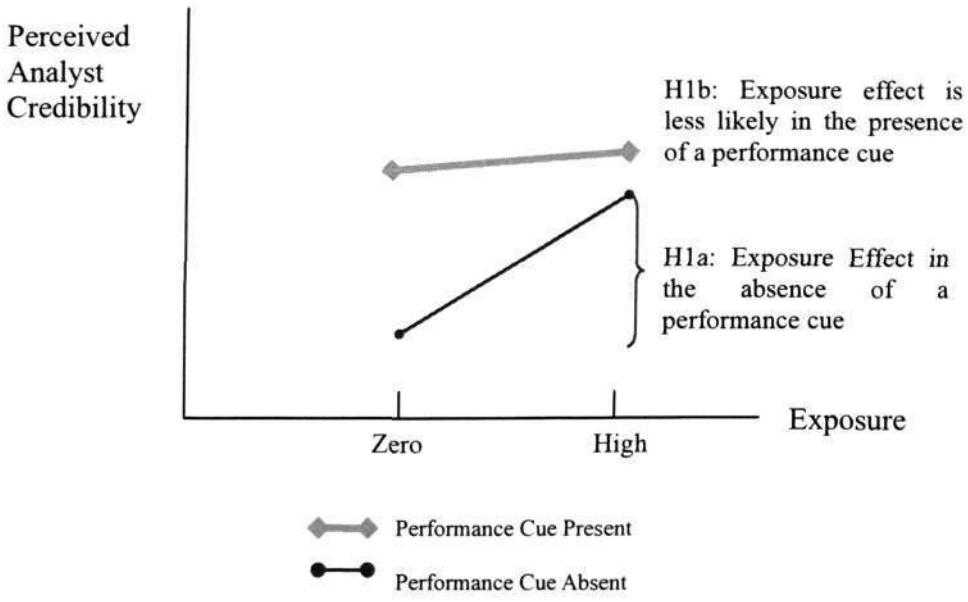


FIGURE 2: Hypothesis 1 — Joint Effects of Exposure and Performance Cue



Joint Effects of Exposure and Analyst's Forecast Error Direction on Investors' Judgments (in the absence of the performance cue about the analyst)

My next research question relates to in the absence of the performance cue about the analyst, whether and how prior repeated exposure will influence investors' judgments after the analyst's actual performance is known (and turns out to be inaccurate).[10] Previous research supports that investors' evaluation of the analyst depends on whether his/her actual performance meets investors' prior expectation. If a person firmly expects a certain event and it does not occur, he will experience dissonance (Carlsmith and Aronson 1963). The reason is that his/her expectation that the event would occur is dissonant with his cognition that the event did not occur. A disconfirmed expectancy should result in a hedonically negative state. Hogan (1987) finds that inconsistency between raters' prior expectations and subordinates' actual performance diminishes performance ratings. It suggests the reasons for this relationship are affective: raters react affectively to surprises and punish the source of their

[10] There are two reasons why I focus on the performance cue absent conditions in testing the second hypothesis. First, it helps to examine the extent the increased exposure can sustain as a strategy to enhance the analyst's credibility. As indicated in Hypothesis 1, the increased exposure has greater effect when the performance cue is absent (compared to the situation when the performance cue is present). Therefore, I want to examine whether this exposure effect can sustain when the actual performance is known to be poor (i.e. ex post accuracy when the actual earnings are announced). Second, the two cells omitted in the design are those involving the zero and high exposure with the performance cue present/pessimistic forecast error. I would expect that in these two cells there is no exposure effect on the changes in the perceived analyst credibility when the actual earnings are announced, since reduced/no exposure effect is predicted (and found) on perceived analyst credibility in the presence of a performance cue (H1b). Hence, the performance cue present conditions provide little additional insights to test the theory. Indeed, I find that when the forecast error is optimistic and the performance cue is present, exposure has no significant influence on the changes in the perceived analyst credibility (reported in the "Additional Analysis").

disconfirmation.[11] Hypothesis 1a predicts that in the absence of a performance cue, investors consider a highly-exposed analyst to be more credible than a non-exposed analyst. Therefore, investors' expectation that the analyst's forecast will be accurate is likely higher for a highly-exposed analyst relative to a non-exposed analyst. Investors will experience stronger (lower) disconfirmation of expectation when the highly-exposed (non-exposed) analyst makes a forecast error. Fragale et al. (2009) find that a person's social status (manipulated as ethnicity, family ties, education, and organization positions) affects observers' attributions and punishments when a person commits wrongdoings (manipulated as a transgression, underpayment of personal income taxes). Their results suggest that greater intentionality is attributed and more serve punishments are recommended for the high status wrongdoers than the low status wrongdoers. In the analyst forecast context, investors are more likely to attribute an inaccurate forecast to internal factors for the highly-exposed analyst than the non-exposed analyst. In sum, when the analyst's actual performance turns out to be poor, I expect that investors will be more disappointed and more likely to blame the highly-exposed analyst than the non-exposed analyst, resulting in a greater lowering of their credibility perceptions in the case of the highly-exposed analyst. This reflects both the affective reaction to the disconfirmation of their prior expectation and the cognitive attribution for the

[11] As indicated by Skowronski and Carlston (1989), other two expectation-contrast theories provide some evidence as well. Adaptation level theory (Helson 1964) and social judgment theory (Sherif and Sherif 1967) assume that integration biases are due to contrast effects in a judgment. The comparison of the stimulus with some internal standard or reference point results in contrast effects (i.e. a stimulus is perceived to be more extreme than it otherwise would be).

inaccurate forecast.

I predict that the extent of disappointment with the highly-exposed (versus non-exposed) analyst is contingent on the direction of the forecast error, and is likely to be greater when the forecast error is optimistic (overestimating the earnings *ex ante*) than when it is pessimistic (underestimating the earnings *ex ante*). Psychology and management research documents that affect in one domain influences affect in the other domain (Lambert 1990; Edwards and Rothbard 2000; Judge and Ilies 2004). For example, the positive (negative) affect at work (i.e. job satisfaction) influences the positive (negative) affect experienced at home (i.e. home satisfaction). When the analyst forecast error is optimistic (actual earnings are lower than the analyst's earnings forecast), investors will be disappointed with the negative earnings surprise towards the company and the associated negative stock price implications, and therefore experience a negative affect. This negative affect exacerbates their disappointment with and discounting of the credibility of the highly-exposed (versus non-exposed) analyst for not factoring in the poorer performance of the company when he/she made the forecast. In contrast, when the analyst forecast error is pessimistic (actual earnings are higher than the analyst's earnings forecast), investors are likely pleased with the company's performance (and the anticipated positive stock price movements) and experience a positive affect. This positive affect reduces their disappointment with and discounting of the credibility of the highly-exposed (versus non-exposed) analyst for not factoring in the better-than-forecast performance of the company when he/she made the

forecast. [12] Research also indicates positive affect reduces the extent of information processing (Fiedler 1988; Bless and Schwarz 1990), which suggests that investors are less likely to blame the analyst when he/she makes a pessimistic (as opposed to optimistic) forecast error. [13]

Hypothesis 2 is stated as follows.

Hypothesis 2: In the absence of a performance cue, when the analyst makes a forecast error, investors will revise their perceived analyst credibility downwards to a greater extent when the investors had higher prior exposure to the analyst's name, with the effect magnified when the analyst makes an optimistic error (actual earnings are lower than the analyst's forecast) relative to a pessimistic error (actual earnings are higher than the analyst's forecast).

Figure 3 and Figure 4 show the conceptual model and a graphical summary of Hypothesis 2.

[12] It is also conceivable that investors may believe that the analyst intentionally under-estimated the actual earnings to generate a positive earnings surprise.

[13] Prospect theory suggests investors react asymmetrically to gains versus losses: investors tend to be risk-averse (risk-seeking) in cases of gains (losses). The *main effect* of error direction is consistent with prospect theory. Hypothesis 2 predicts the interaction effect of error direction and exposure: investors will penalize the highly-exposed analysts to a greater extent when the error is optimistic. The risk preference cannot predict the exposure effect, i.e., how investors' perceptions on the analyst is influenced by the prior exposure of the analyst's name. In other words, Hypothesis 2 cannot be fully explained by the prospect theory.

FIGURE 3: Construct and Operationalization of Hypotheses 2

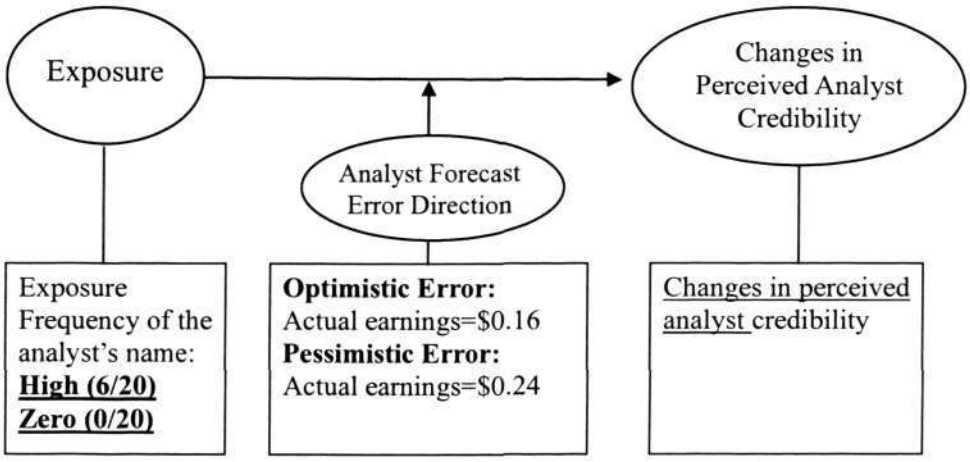
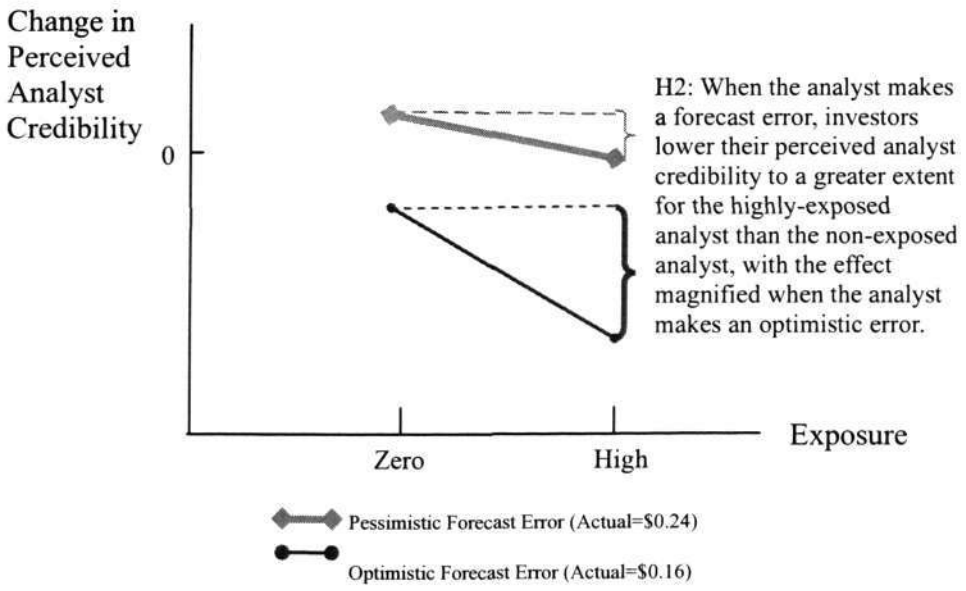


FIGURE 4: Hypothesis 2 – Joint Effects of Exposure and Error Direction on Changes in Perceived Analyst Credibility (in the absence of a performance cue)



CHAPTER III:

METHOD

Participants

I conduct an experiment with 136 MBA students from a major Singapore university. The participants have a mean (median) working experience of 7.21 (5.58) years. On average, the participants have taken 2.69 (3.71) accounting (finance) courses. Seventy-two (Fifty-nine) percent of the participants have investment experience in stock (fund) market. Each student is paid twenty Singapore dollars for participating in the experiment.[14]

Design

A three-way (exposure; performance cue; forecast error direction) fractional factorial design (Winer et al. 1991) is employed to test the hypotheses.[15] Specifically, holding constant the analyst's forecast error as optimistic, a 2 (Exposure: zero versus high) × 2 (Performance cue: absent versus present)

[14] Before the formal experiment, I conduct a pilot study using 42 second-year undergraduate students major in accounting and business. In this pilot study, I test a 2 (Exposure: zero versus high) × 2 (Performance cue: absent versus present) × 2 (Forecast error: optimist versus pessimistic) full factorial design. The key manipulations are similar to the formal experiment (except that I added the pessimistic and optimistic forecast error cells with the performance cue present. Results in the pilot study are qualitatively similar to the formal experiment reported.

[15] As explained in footnote 10, I omit two cells in which the performance cue is present and forecast error is pessimistic. In a pilot study in which full factorial design is tested, results suggest that when performance cue is presented, there is no significant effect of exposure for either optimistic error (one-tailed p=0.25) or pessimistic error (one-tailed p=0.16).

between-subjects design is used to test whether the mere exposure of the analyst's name influences investors' judgments in the absence of a performance cue (Hypothesis 1a) and whether exposure has any incremental effect when analyst's ex ante performance cue is also present (Hypothesis 1b). The first independent variable is the exposure frequency of the target analyst's name (zero, high). The second independent variable is the analyst's ex ante performance cue (absent, present). In the performance cue absent condition, only the target analyst name is provided in the press release, whereas in the performance cue present condition, the target analyst name is accompanied by a description in the press release that the analyst is a "Wall Street Journal All-Star analyst."

To test Hypothesis 2, holding the performance cue absent, a 2 (Exposure: zero versus high) × 2 (Error direction: optimistic versus pessimistic) between-subjects design is employed. Participants are informed that the company's actual earnings are lower (greater) than the analyst's forecast in the optimistic (pessimistic) forecast error condition. The magnitude of forecast error, in the optimistic (pessimistic) forecast error condition, is held constant in all conditions. Table 2 summarizes the manipulations.

TABLE 2: Summary of the Between-subjects Manipulations

	Performance Cue		
	Absent		Present
Error Direction[a] / Exposure	Optimistic [Actual=$0.16]	Pessimistic [Actual=$0.24]	Optimistic [Actual=$0.16]
Zero	Condition 1	Condition 5	Condition 3
High	Condition 2	Condition 6	Condition 4

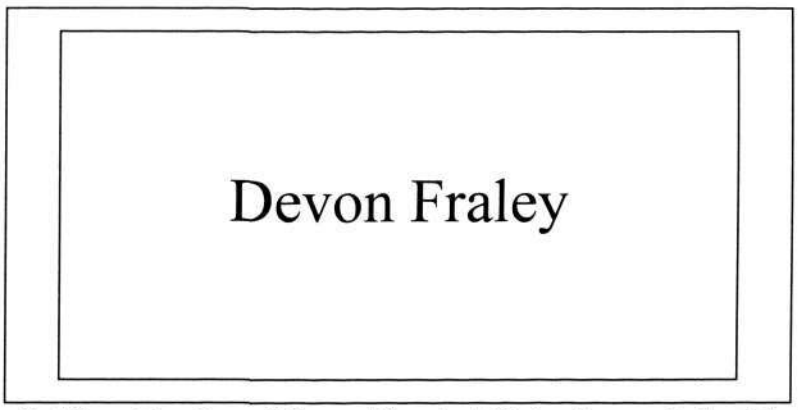
[a] The analyst's earnings forecast in the press release was $0.20. The magnitude of forecast error is held constant across conditions (=$0.04).

Procedure

Participants are randomly assigned to the treatment conditions. At the beginning of the experiment, participants are told that they will complete two studies; a visual study followed by an earnings forecast study. The reason I choose to label the first part a visual study (where the exposure frequency of analyst's name is manipulated) is to avoid any possible demand effects on participants. In the visual study, participants are told to focus on the screen and watch the slide show. Twenty slides containing nine different English names (first name plus last name) are presented one by one in the projector screen at two seconds interval. These nine names include both the target (alternative) analyst's name in the high (zero) exposure condition and eight other filler names. The target analyst's name is the name whose exposure frequency is manipulated, and is shown as the analyst who makes the earnings forecast in the press release in the main experiment. In the high exposure condition, the target

name appears a total of six times out of twenty slides, whereas in the zero exposure condition, the target name never appears in the visual study. [16] In other words, the high exposure and zero exposure conditions will see the same target name in the main experiment. The only difference is that the target name appears six times in the slide show for the high exposure condition while for the zero exposure condition, an alternative name replaces the target name in the corresponding positions in the slide show. An example of the presentation of a target name is shown in Figure 5.

FIGURE 5: An Example of the Presentation of the Target Name[a]



[a] I use the "Times New Roman" font and font size "66" for all names in the slide show.

In selecting the target, alternative and filler names, I follow several rules. First, English names are used because the largest brokerage firms are U.S. companies, and the use of English names helps to increase the external validity of the results. Second, I choose the middle-ranked frequent last and first names

[16] The reason I choose a zero frequency exposure as a baseline is that I propose a strategy for analysts to enhance her/his credibility with investors, especially for those analysts new to the profession or employed in the new brokerage firms. I manipulate the high exposure condition to incorporate an exposure of six times because some psychology research suggests that the ratings of the exposed stimulus start to level off or decline after relatively a finite number of stimulus exposure (see Bornstein 1989 for a review).

from the U.S. Census Bureau (1990)[17] to remove possible semantic implication of the name, as shown in Table 3.[18] Finally, I choose first names that are usually used as male names, since most analysts are male.[19] In the experiment, I use "Devon Fraley" as the target analyst's name. In the high exposure condition, "Devon Fraley" appears six times in the slide show while in the zero exposure condition, "Kirby Sikora" replaces "Devon Fraley" in the corresponding positions; the other names are all the same for the two conditions.[20] In order to avoid any possible recency or primacy effect, the first and the last name shown are all filler names. Table 4 summarizes the sequence of names shown in each condition.

[17] More recent US Census (2000) only provides the top 1,000 names and doesn't provide frequency for each first and last name. In contrast, US Census (1990) lists the frequency statistics for each first and last name. Therefore, I pick up the target and filler names used in the experiment based on US Census (1990).

[18] I choose the median-ranked first and last names. I do not choose those top-ranked names because participants may have already been very familiar with those names; therefore, the additional high exposure introduced by the exposure stage will have little incremental effect on the familiarity with the names. I also avoid those low-ranked names, because participants may treat these names to be unusual and lead to unintended effects.

[19] Green et al. (2009) finds that, on average, 15.6 percent of analysts from all brokerage firms are female over the period 1995-2005.

[20] To account for the possibility that the analyst may be a female, I choose names, Devon and Kirby, that can be male or female names but are much less frequently used as female than male first names: the frequency in percent for Devon is 0.014/0.007 for male/female first names; the frequency in percent for Kirby is 0.009/0.002 for male/female first names (US census 1990). I collect a small sample of 29 students from Singapore and ask half of them whether Devon Fraley (Kirby Sikora) is a female or male name. Results show that there is no significant difference in the perceived gender for these two names (two-tailed p=0.61/0.81 for 'Devon Fraley'/'Kirby Sikora', respectively).

TABLE 3: Frequency of the Last and First Names Used in the Experiment[a]

First Name	Ordinal Rank (**Total= 1,219**)	Last Name	Ordinal Rank (**Total= 88,799**)
Devon	566	Grimm	1517
Norbert	594	Purvis	1726
Alvaro	619	Adair	1843
Vaughn	636	Trejo	1979
Hiram	666	Hirsch	2199
Maynard	672	Jarrell	2276
Hollis	707	Fraley	2552
Kirby	722	Gillen	3603
Leonel	742	Welker	4373
Genaro	783	Sikora	6577

[a] Source: the U.S. Census Bureau (http://www.census.gov/genealogy/names/)

TABLE 4: Sequence of Names shown in the Experimental Conditions

	Sequence of Names (Target Name = Devon Fraley)
Zero Exposure Condition	Norbert Grimm -- **Kirby Sikora** -- Vaughn Purvis -- Hiram Trejo -- Maynard Hirsch -- Genaro Adair -- **Kirby Sikora** -- Norbert Grimm -- Leonel Gillen -- Alvaro Jarrell -- **Kirby Sikora** -- Hollis Welker -- Hiram Trejo -- **Kirby Sikora** -- Vaughn Purvis -- **Kirby Sikora** -- Genaro Adair -- Alvaro Jarrell -- **Kirby Sikora** -- Maynard Hirsch
High Exposure Condition	Norbert Grimm -- **Devon Fraley** -- Vaughn Purvis -- Hiram Trejo -- Maynard Hirsch -- Genaro Adair -- **Devon Fraley** -- Norbert Grimm -- Leonel Gillen -- Alvaro Jarrell -- **Devon Fraley** -- Hollis Welker -- Hiram Trejo -- **Devon Fraley** -- Vaughn Purvis -- **Devon Fraley** -- Genaro Adair -- Alvaro Jarrell -- **Devon Fraley** -- Maynard Hirsch

After the slide show, participants are asked two questions unrelated to current experiment to clear participants' short memory.[21] Then, participants are told to put aside the materials for the visual study and continue to do the earnings forecast study. After reading the background information about a

[21] In these two unrelated questions, participants are asked what names appeared in the first and last slide. Both the target name and the alternative name are not mentioned in these two questions.

listed manufacturing company "Theta Inc.," participants are shown the five-year financial summary for the period 2004-2008. This is followed by the quarterly earnings for the past two years and for the first two quarters of financial-year 2009, and consensus EPS forecast for the third quarter of 2009 ($0.18) as well as the consensus 12-month EPS forecast for 2009 ($0.80). Participants are asked to provide their earnings forecasts for the third quarter and full year of 2009, the confidence in their earnings estimates, and evaluations of Theta's earnings growth and stock appreciation potential in the next twelve months.

Participants then proceed to open Envelope A, which contains the press release issued on August 31, 2009 about the analyst's earnings forecast for Theta's third quarter earnings. In the performance cue absent condition, participants read the following statement.

Earnings Digest: Analyst Sees a Bright 3rd-quarter for Theta

Monday August 31, 2009 11:11am ET

NEW YORK -- Analyst, **Devon Fraley**, estimates Theta's earnings per share for the third-quarter ending September 30, 2009 will be **$0.20**.

In the performance cue present condition, participants read the following statement.

Earnings Digest: Analyst Sees a Bright 3rd-quarter for Theta

Monday August 31, 2009 11:11am ET

NEW YORK – **Wall Street Journal All-Star analyst, Devon Fraley**, estimates Theta's earnings per share for the third-quarter ending September 30, 2009 will be **$0.20**.

[The Wall Street Journal publishes its All-Star analyst list each year. The survey ranks analysts according to how well they pick stocks and how well they predict earnings for the companies they cover.] [22]

I set the analyst's forecast as good news compared to the consensus analysts forecast ($0.18) [23] and the same quarter realization in the prior year, because this is consistent with prior research that investors expect analysts to issue good news forecast (Hirst et al. 1995), and good news earnings forecast may be less credible (Hutton et al. 2003). [24] Therefore, in this scenario, the role of an analyst's credibility is critical to enhance the believability of his earnings forecast (William 1996; Mercer 2004, 2005; Hirst et al. 2007).[25]

After reading the press release, participants are asked to give their updated earnings forecasts for the third quarter and full-year 2009, their confidence in the forecasts, and future earnings growth and stock price appreciation potentials in the next twelve months. In addition, participants are asked to indicate their willingness to rely on the analyst's report in the future, the analyst's

[22] I provide this short note about the Wall Street Journal All-Star analyst to ensure that all participants understand the meaning of "All-Star analyst."

[23] If investors use the consensus analysts forecast (=$0.18) as the benchmark to make their estimates, the magnitude of forecast error in the optimistic conditions (actual earnings=$0.16; absolute forecast error =$0.02) would be lower than that in the pessimistic conditions (actual earnings=$0.24; absolute forecast error =$0.06). In this case, I would be less likely to find an exposure effect in the optimistic conditions proposed and documented in the paper.

[24] In a pilot test, I set the analyst's earnings forecast as $0.19. Results are qualitative similar to the current experiment.

[25] When the analyst's forecast is lower than the consensus or the same quarter earnings one year earlier, it is possible that the bad news forecast itself is credible and the analyst does not need to worry about the persuasiveness of the forecast.

competence, trustworthiness, reputation, their expectation that the analyst's forecast to be accurate, the believability of the forecast, the likelihood that the analyst was intentionally misguiding the market. All these questions are assessed by 11-point scales (0 = Extremely Low and 10 = Extremely High).[26] In addition to the absolute analyst's competence (trustworthiness and reputation) level ratings, similar to Kadous et al. (2009), participants are asked to provide their assessments on the extent to which the analyst has greater competence (trustworthiness and reputation) than 100 randomly selected analysts, which are less prone to ceiling and floor effects.

After the participants make their assessments on the analyst based on the press release, they are asked to put all materials to Envelope A and open Envelope B. For those participants in the performance cue absent condition, Envelope B contains the following actual earnings announcement for the optimistic (pessimistic) forecast error condition.

On October 14, 2009, Theta announces that the earnings per share for the third-quarter ending September 30, 2009 are $0.16 ($0.24).

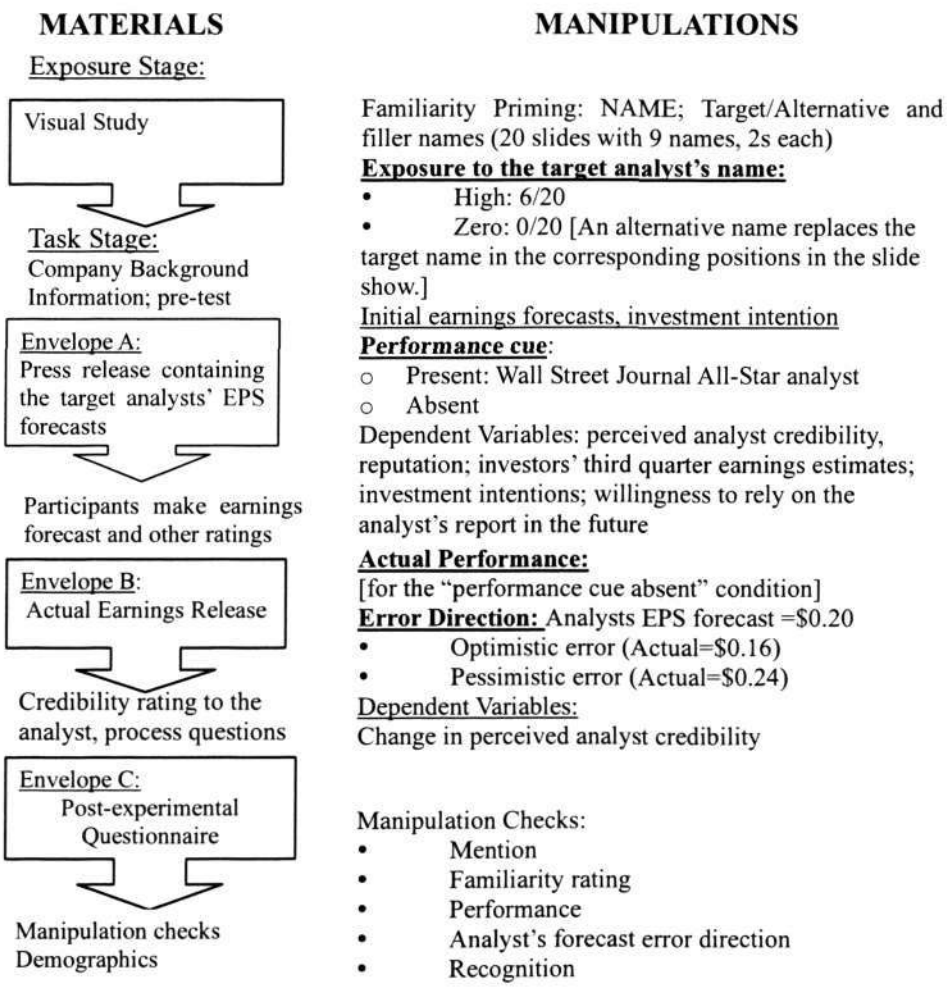
For those participants in the performance cue present condition, they receive Envelope B containing the actual earnings release which implies an optimistic forecast error.[27]

I hold constant the magnitude of the analyst's forecast error and set the

[26] For the confidence questions, the 11-point scale is from 0.0 to 1.0.
[27] I provide all participants the actual earnings information to ensure that the length of the experimental material is the same for all conditions.

actual forecast error to be positive (negative) $0.04, suggesting that the analyst in the press release makes an optimistic (a pessimistic) earnings forecast. Participants are then asked to evaluate Theta's full-year EPS for the year 2009, earnings growth potential and stock price appreciation potential, their willingness to rely on the analyst's report in the future, the analyst's absolute and relative competence, trustworthiness, reputation and the likelihood that the analyst was intentionally misguiding the market. I also assess the participants' disappointment, satisfaction level with the actual analyst performance by using the same 11-point scales (0 as "extremely low" and 10 as "extremely high"). In addition, participants are asked to rank the likelihood of external factors (luck, unstable environment and volatile earnings) and internal factors (ability and effort) which may cause the analyst's inaccurate forecast (1 as "the most likely cause" and 5 as "the least likely cause"). Following this, participants complete the post-experimental questionnaire including the manipulation checks and demographic questions about their working and investment experience. Figure 6 summarizes the experimental materials and procedure.

FIGURE 6: Order of Experimental Materials and Manipulations



CHAPTER IV:

RESULTS

Manipulation Checks

To check whether the high exposure frequency increases the accessibility of the target analyst's name, in the post-experimental questionnaire, participants are asked to indicate that whether the press release mentioned the specific analyst's name, and to rate their familiarity with the analyst's name on an 11-point scale ranging from 0 (not familiar at all) to 10 (completely familiar). Seventy-six percent of the participants in the high exposure condition correctly remember that the press release issued on 31 August 2009 mentioned the specific analyst's name, while only forty-one percent of the participants in the zero exposure condition correctly remember this ($F=19.13$, two-tailed $p<0.01$). This suggests that the exposure frequency influences participants' attention to the analyst name in the press release.[28] In particular, participants in the high exposure condition rate the analyst name mentioned in the press release to be significantly more familiar (mean=6.96) than those in the zero exposure condition (mean=2.67; $F=75.81$, two-tailed $p<0.01$). All (Fifty-nine percent) of the participants in the high (zero) exposure condition correctly recognize that

[28] Results are similar, when I rerun the analysis by excluding those participants who fail this manipulation check question about whether the press release mentioned the specific analyst's name.

the analyst's name was (was not) shown in the visual study (F=46.63, two-tailed p<0.01). Seventy-five percent of all participants correctly answer the question on whether the analyst mentioned in the press release is a Wall Street Journal All-Star analyst. There is no significant difference in the correction rate for this manipulation check question about performance between the performance cue absent condition and the performance cue present condition (F<0.01, two-tailed p=0.97). Another question relating to the analyst's forecast error asks the participants whether Theta's actual third quarter earnings are greater or lower than the analyst's forecast shown in the press release. Seventy-four percent of all participants correctly answer that the analyst's earnings forecast in the press release is above (below) the actual third quarter EPS. Error direction has no significant effect on this correction rate (F=0.91, two-tailed p=0.34). When I exclude those participants who fail the manipulation check questions about the performance cue and the analyst forecast error direction from the main tests, results are similar.

In the experiment, one important feature is that I set the analyst's earnings forecast for the third quarter of 2009 to be $0.20 in the press release, which is good news compared to the consensus analysts forecast and the same quarter earnings in the prior year. I check the participants' initial earnings estimates for Theta's third quarter earnings before the press release. Among all conditions, three participants' initial earnings estimates are higher than $0.20. In this case, the news contained in the press release (the analyst's forecast $0.20) is bad news for them. The different news valence has different implication to investors.

For example, prior studies show that bad news is more credible than good news because it is contrary to the management/the analyst's incentive (William 1996; Hutton et al. 2003). Therefore, including these three participants will create bias for the subsequent analysis. Therefore, these three participants are excluded in the analyses. However, results are qualitatively the same if I include them.

Test of Hypothesis 1a and Hypothesis 1b

Effects of Exposure and Performance Cue on Investors' Judgments

To test Hypothesis 1a and Hypothesis 1b, I use two sets of dependent variables: investors' perceived analyst credibility and their earnings- and investment-related measures. Psychology research documents two dimensions for the source credibility, i.e., source expertise and trustworthiness (Hovland et al. 1953; Mercer 2004, 2005). To assess participants' evaluations on the analyst's competence, trustworthiness and reputation, I ask the following questions: "To what extent do you think the analyst in the press release is competent / trustworthy/ reputable? (0 as "not at all competent/trustworthy/reputable" and 10 as "extremely competent/trustworthy/reputable"). In addition to the absolute credibility measures, I also examine the relative credibility ratings, which reflect investors' perceptions on the analyst's rank among 100 randomly selected analysts (Kadous et al. 2009). The following questions are asked: "Suppose the analyst in the press release is one among 100 randomly selected analysts. In your opinion, the analyst in the press release is more

competent/trustworthy/reputable than _____of these analysts. (*Write a number between 0 and 100.*)" [29] Factor analysis supports that these two variables (competence and trustworthiness) reflect a single underlying factor (Cronbach's Alpha=0.81/0.92 for absolute/relative measures). Therefore, I take the average of participants' ratings on the analyst's competence and trustworthiness as a single credibility measure. I use perceived analyst reputation as a supplemental measure to the perceived analyst credibility. Furthermore, to test whether the manipulated variables and credibility variables have significant consequences in influencing participants' earnings and investment decisions, I also examine participants' earnings estimates, investment intentions and their willingness to rely on the analyst's report in the future. Factor analysis supports that participants' evaluations on the company's earnings growth and stock price appreciation potentials reflect a single underlying factor (Cronbach's Alpha=0.83). I take the average of these two variables to proxy the participants' investment intentions.

Tables 5 and 6 (also Figures 7 and 8) summarize the results of participants' perceived analyst credibility and earnings estimates after they receive the press release about the analyst's earnings forecast. In each table, Panel A and panel B present the descriptive statistics and ANOVA/ANCOVA results for the two dependent variables. Panel C shows the planned contrast results for Hypothesis

[29] Factor analysis suggests that the absolute and relative variables load on two distinct underlying measures. Therefore, I report these two measures in the paper. However, the results are qualitatively similar for both measures. I use the term "perceived analyst credibility" to refer to investors' assessments on the analyst absolute credibility and the term "perceived analyst relative credibility" to refer to investors' assessments on the analyst credibility relative to the randomly selected peers.

1a and Hypothesis 1b.[30]

Hypothesis 1a and Hypothesis 1b together suggest an ordinal interaction between exposure and performance. The interaction effect, as captured in the ANOVA table (Table 5) and ANCOVA table (Table 6), is marginally significant for credibility and earnings estimates measures at p = 0.07 (one-tailed) and p=0.08 (one-tailed), respectively.[31] As a more powerful test of this ordinal interaction (Buckless and Ravenscroft 1990),[32] I conduct a contrast test with the weights -3 in the "zero exposure + performance cue absent" condition, +1 in the "high exposure + performance cue absent", "zero exposure + performance cue present", and "high exposure + performance cue present" conditions. With these contrast codes, I can test the specific type of interaction effect between exposure and the performance cue. It not only allows for the exposure effect in performance cue absent conditions, but also a comparison of the exposure effect between the performance cue absent conditions and the performance cue present conditions. The contrast test is significant for the perceived analyst credibility measures (F=12.65, two-tailed p<0.01), perceived analyst relative credibility (F=4.24, two-tailed p=0.04) and earnings estimates (F=3.28, two-

[30] Results for all tests of hypotheses are similar after controlling for the participants' working experience, and number of accounting and finance courses they have taken.

[31] I run a planned contrast with weights -1/1/1/-1 (-1 in "zero exposure + performance cue absent" condition, +1 in "high exposure + performance cue absent", +1 in the "zero exposure + performance cue present" condition, and -1 in the "high exposure + performance cue present" condition), and obtain the same p-value as the interaction terms in the ANOVA/ANCOVA tables.

[32] ANOVA only tests the significant differences among cell means and fails to indicate the functional relationships among cell means. By contrast coding, I can specify a *pattern* of relationships among cell means according to the hypotheses. Contrasting coding provides greater statistical power than the conventional ANOVA (Buckless and Ravenscroft 1990). There are other accounting papers using contrast coding to test the ordinal interaction (for example, Hirst et al. 2007)

tailed p=0.07).

FIGURE 7: Perceived Analyst Credibility as a Function of Exposure and Performance Cue

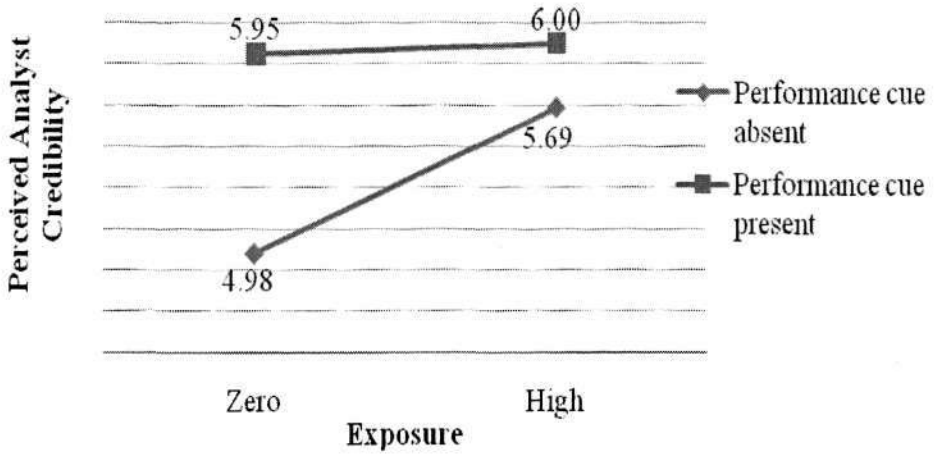


TABLE 5: Perceived Analyst Credibility after the Analyst's Forecast

Panel A: Mean (Standard Deviation) Perceived Analyst Credibility[a]

	Performance Cue[c]		
Exposure[b]	**Absent**	**Present**	**Row Mean**
Zero	4.98 (1.19) N=22 [Condition 1]	5.95 (1.12) N=22 [Condition 3]	5.47 (1.25) N=44
High	5.69 (0.94) N=21 [Condition 2]	6.00 (0.86) N=24 [Condition 4]	5.86 (0.90) N=45
Column Mean	5.33 (1.12) N=43	5.98 (0.98) N=46	

Panel B: ANOVA Results (DV= Perceived Analyst Credibility)

Source	df	Mean Square	F	p-value (two-tailed)
Intercept	1	2840.08	2654.83	0.00
Exposure	1	3.19	2.99	0.09
Performance	1	9.19	8.59	0.00
Exposure × Performance	1	2.47	2.31	0.13

TABLE 5 (Continued)
Perceived Analyst Credibility after the Analyst's Forecast

Panel C: Planned Contrast Tests

Source	df	Mean Square	F	p-value (two-tailed)
Contrast [H1a: Effect of exposure in the absence of a performance cue] [d]	1	5.47	5.11	0.03
Contrast [H1b: Effect of exposure in the presence of a performance cue] [e]	1	0.02	0.02	0.88
Contrast [H1a & H1b][f]	1	13.54	12.65	<0.01

[a] Credibility variable is measured as the average of the perceived analyst competence and trustworthiness. Factor analysis suggests that these two variables (perceived analyst competence and trustworthiness) reflect a single factor (Cronbach's Alpha=0.81).

[b] Exposure of the analyst's name is manipulated between-subjects as either zero exposure or high exposure. In the zero exposure condition, the analyst's name mentioned in the press release never appears in the previous visual study. In the high exposure condition, the analyst's name appears 6 times in the previous visual study.

[c] Performance cue is manipulated as between-subjects as either absent or present. In the performance cue absent condition, participants receive the press release about the analyst's earnings forecast for Theta's third quarter earnings only. In the performance cue present condition, the press release indicates the analyst is a Wall Street Journal All-Star analyst.

[d] The contrast weights used for H1a are -1 in the "zero exposure + performance cue absent" condition, +1 in the "high exposure + performance cue absent". The mean perceived analyst credibility in "zero exposure + performance absent" condition is significantly lower than the mean rating in "high exposure + performance absent" condition, which is consistent with Hypothesis 1a: the mere exposure effect.

[e] The contrast weights used for H1b are -1 in the "zero exposure + performance cue present" and +1 in the "high exposure + performance cue present" conditions. The mean perceived analyst credibility is not significantly different between "zero exposure + performance present" condition and "high exposure + performance present" condition, which is consistent with Hypothesis 1b: the exposure effect is less likely when the performance cue is present.

[f] Contrast weights are -3 in the "zero exposure + performance cue absent" condition, +1 in the "high exposure + performance cue absent", "zero exposure + performance cue present", and "high exposure + performance cue present" conditions.

FIGURE 8: Investors' Earnings Estimates as a Function of Exposure and Performance Cue

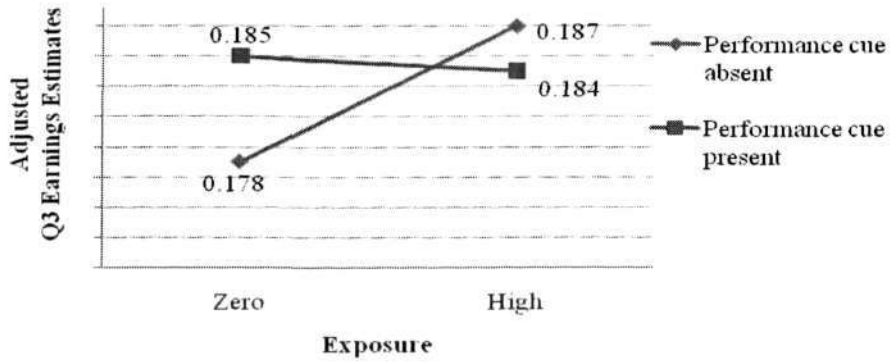


TABLE 6: Investors' Earnings Estimates after the Analyst's Forecast

Panel A: Adjusted Mean Earnings Estimates[a] (Standard Deviation)

	Performance Cue		
Exposure	**Absent**	**Present**	**Row Mean**
Zero	0.178 (0.003) (N=22) [Condition 1]	0.185 (0.003) (N=22) [Condition 3]	0.181 (0.002) N=44
High	0.187 (0.003) (N=21) [Condition 2]	0.184 (0.003) (N=24) [Condition 4]	0.185 (0.002) N=45
Column Mean	0.182 (0.002) N=43	0.184 (0.002) N=46	

Panel B: ANCOVA Results[b]

Source	df	Mean Square	F	p-value (two-tailed)
Intercept	1	0.01	37.01	0.00
Pre_Q3EPS	1	0.02	83.29	0.00
Exposure	1	0.00	1.40	0.24
Performance	1	0.00	0.29	0.59
Exposure × Performance	1	0.00	1.99	0.16

TABLE 6 (Continued)
Investors' Earnings Estimates after the Analyst's Forecast

Panel C: Planned Contrast Tests

Source	df	Mean Square	F	p-value (two-tailed)
Contrast [H1a: Effect of exposure in the absence of a performance cue][c]	1	0.00	3.27	0.07
Contrast [H1b: Effect of exposure in the presence of a performance cue][d]	1	0.00	0.03	0.87
Contrast [H1a & H1b][f]	1	0.00	3.28	0.07

[a] Adjusted means refer to the adjusted marginal means of investors earnings estimates for third quarter EPS after controlling their initial earnings estimates as covariates.
[b] In the ANCOVA test, the dependent variable is investors' earnings estimates after the press release and investors' initial earnings estimates for the third quarter is used as a covariate.
[c] The contrast weights used for H1a are -1 in the "zero exposure + performance cue absent" condition, +1 in the "high exposure + performance cue absent". The mean third quarter earnings estimate in "zero exposure + performance absent" condition is significantly lower than the mean forecast in "high exposure + performance absent" condition, which is consistent with Hypothesis 1a, the mere exposure effect.
[d] The contrast weights used for H1b are -1 in the "zero exposure + performance cue present" and +1 in the "high exposure + performance cue present" conditions. There is no significant difference in the mean third quarter earnings estimates between "zero exposure + performance present" condition and "high exposure + performance present" condition, which is consistent with Hypothesis 1b.
[f] Contrast weights are -3 in the "zero exposure + performance cue absent" condition, +1 in the "high exposure + performance cue absent", "zero exposure + performance cue present", and "high exposure + performance cue present" conditions.

Hypothesis 1a predicts that in the absence of a performance cue, exposure to the analyst's name enhances participants' perceived analyst credibility and subsequent earnings and investment-related judgments. The contrast test[33] (Panel C, Table 5) suggests that, when no performance cue is given, participants perceive the highly-exposed analyst to be more credible (mean=5.69) relative to the non-exposed analyst (mean=4.98, two-tailed p=0.03).[34] Furthermore, in the absence of a performance cue, participants rate the highly-exposed analyst to be more reputable (mean=5.81) than the non-exposed analyst (mean=5.00, p=0.02).[35] Perceived analyst relative credibility also follows the similar pattern. When no performance cue about the analyst is given, participants consider the highly-exposed (non-exposed) analyst to be marginally more credible than 51.25 (44.41) of 100 randomly selected analysts (p=0.10). Participants also perceive the highly-exposed analyst to be relatively more reputable than the non-exposed analyst (mean for the zero/high exposure condition=44.00/51.00), but this difference is not statistically significant (p=0.12). Furthermore, participants consider the earnings forecast provided by the highly-exposed analyst to be more believable (mean=5.71) than the forecast provided by the non-exposed analyst (mean=5.05, p=0.05).

Panel C of Table 6 reports the planned contrast results for participants' earnings estimates for the third quarter. For the earnings-related and investment

[33] The contrast weights used for H1a are -1 in the "zero exposure + performance cue absent" condition, +1 in the "high exposure + performance cue absent", i.e., a simple effect of exposure when the performance cue is absent. The same contrast weights are used to test the investors' earnings estimates in Panel C of Table 6.

[34] Results are qualitatively the same when I combine the perceived competence, trustworthiness and reputation as a single factor (Cronbach's Alpha=0.87).

[35] The p-value figures for the paired comparisons are all one-tailed, unless otherwise indicated.

intention variables, participants are asked to provide their assessments twice, before and after the press release about the analyst forecast. Therefore, the adjusted means after inclusion of the initial assessment as covariate are reported. Participants' earnings forecast for the third quarter of 2009 in the "high exposure + performance cue absent" condition (adjusted mean=0.187) is significantly greater than the "zero exposure + performance cue absent" condition (adjusted mean=0.178, two-tailed p=0.07). This result is consistent with the prediction in Hypothesis 1a.

When the performance cue is absent, participants are significantly more confident in their own earnings estimates when the forecast in the press release is provided by a highly-exposed analyst (adjusted mean=0.68) than a non-exposed analyst (adjusted mean=0.62, p=0.02). However, there is no effect on investment intentions (adjusted means for the zero/high exposure condition =6.18/6.35, p=0.20). Further analysis shows that the exposure manipulation has a significant positive effect on participants' perceived earnings growth potential (adjusted mean for the zero/high exposure condition=6.06/6.35, p=0.09) but no effect on their assessments of stock appreciation potential (adjusted mean for the zero/high exposure condition=6.24/6.35, p=0.33) or earnings estimates for the full year 2009 (mean for the zero/high exposure condition =0.763/0.770, p=0.32). Participants are also more willing to rely on the high-exposed analyst's earnings report in the future (means for the zero/high exposure condition =5.27/5.95, p=0.05).

Consistent with Hypothesis 1b, results indicate that when the analyst is

known to be an All-Star analyst, exposure of the analyst's name has no significant effect in increasing the perceived analyst credibility (mean for the zero/high exposure condition=5.95/6.00, two-tailed p=0.88).[36] When the analyst is an All-Star analyst, exposure has no significant effect on the perceived relative credibility (means=51.77 and 55.73 for the non-exposed analyst and the highly-exposed analyst respectively, p=0.22). No significant difference is found for perceived analyst reputation (mean for the zero/high exposure condition=6.27/6.42, p=0.35) and perceived relative reputation (mean for the zero/high exposure condition =54.27/59.38, p=0.19). In addition, when the analyst is known as an All-Star analyst, participants perceive the earnings forecast provided by the non-exposed analyst as believable as the forecast provided by the highly-exposed analyst (mean for the zero/high exposure condition =5.95/5.88, p=0.42).

Participants' earnings estimates also show that there is no incremental effect of exposure when the analyst's performance cue is present. I compare the mean third quarter EPS forecast in the "zero exposure + performance present" condition (adjusted mean=0.185) to the mean forecast in the "high exposure + performance present" condition (adjusted mean=0.184) and find the difference to be insignificant (Panel C, Table 6: two-tail p=0.87). No significant differences are found for the participants' full-year earnings estimates (adjusted mean for the zero/high exposure condition=0.769/0.769, p=0.49), their

[36] The contrast weights used for H1b are -1 in the "zero exposure + performance cue present" condition, +1 in the "high exposure + performance cue present", i.e., a simple effect of exposure when the performance cue is present. The same contrast weights are used to test the investors' earnings estimates in Panel C of Table 6.

confidence in their own earnings estimates (adjusted mean for the zero/high exposure condition= 0.69/0.67, p=0.24), investment intentions (adjusted mean for the zero/high exposure condition=6.45/6.28, p=0.18)[37] and participants' willingness to rely on the analyst's future reports (mean for the zero/high exposure condition= 5.77/5.92, p=0.36). Overall, these results are consistent with Hypothesis 1b.

As an additional test, I examine the perceived analyst credibility when the analyst is either highly-exposed or an All-Star analyst. The mean perceived analyst credibility in the "high exposure + performance cue absent" condition (mean= 5.69) is not significantly different from the mean in the "zero exposure + performance cue present" condition (mean = 5.95, p=0.21). Tests on other variables (perceived analyst relative credibility, absolute/relative reputation, believability, third-quarter earnings estimates, confidence in their earnings estimates, investment intentions and willingness to rely on the analyst's future report) all show similar results (smallest p=0.12).

Overall, these results support that exposure and performance cue about the analyst have substitutive effects on perceived analyst credibility and participants' earnings-related and investment-related judgments. In the absence of a performance cue, participants perceive the highly-exposed analyst more credible than the non-exposed analyst. In the presence of a performance cue, exposure has no incremental effect on participants' judgments.

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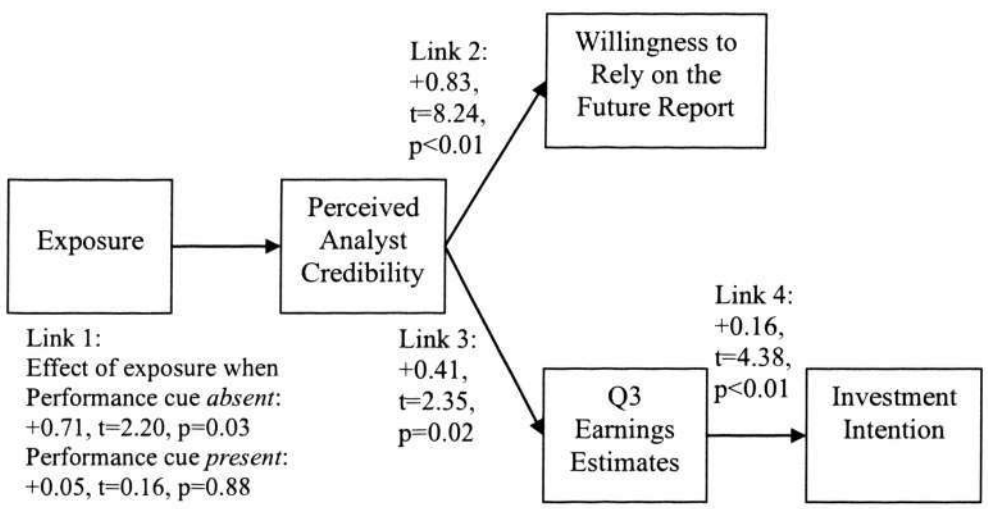
[37] Additional analysis shows that no significant difference is found for either earnings growth potential or stock appreciation potential (two-tailed p=0.63/0.55, respectively).

Process Model Tests

I rely on structural equation analysis to verify that the exposure effect on investors' judgments and decisions is due to the underlying mechanisms I propose. I posit that exposure and performance cue jointly influence the perceived analyst credibility, which further affects investors' judgments, including investors' earnings- and investment-related judgments and their willingness to rely on the analyst's report in the future.

I use AMOS software to test the structural equation model that simultaneously investigates the relationships among the variables. Results are shown in Figure 9. The Tucker-Lewis Index, which measures the proportion of improvement of the fit of the model relative to a null model, is 108 percent. The conventional χ^2 test (χ^2=11.07, p=0.75) and an Incremental Fit Index (105 percent) confirm the model's goodness of fit.

FIGURE 9: Model of the Exposure Effect on Perceived Analyst Credibility and Investors' Judgments



As shown in link 1 of the model, when the performance cue about the analyst is absent, exposure has significant effect on the perceived analyst credibility ($t=2.20$, $p=0.03$). In contrast, when the performance cue about the analyst is present, there is no significant effect of exposure ($t=0.16$, $p=0.88$). The perceived analyst credibility is important: it is positively associated with participants' willingness to rely on the analyst's future report (link 2, $t=8.24$, $p<0.01$). In addition, the perceived analyst credibility affects participants' earnings estimates for the third quarter (link 3: $t=2.35$, $p=0.02$), which further influences participants investment intentions on the firm (link 4: $t=4.38$, $p<0.01$).

To test whether perceived analyst credibility fully mediates the effect of exposure on the participants' earnings estimates and willingness to rely on the analyst's future report, I add the direct links from exposure to reliance and earnings measures to the previous model. Untabulated results suggest that when perceived analyst credibility acts as the mediator in the model, exposure has no direct effect on the participants' willingness to rely on the analyst's future report ($t=0.23$, $p=0.82$ when the performance cue is absent and $t=0.45$, $p=0.65$ when the performance cue is present) and earnings estimates ($t=1.24$, $p=0.22$ when the performance cue is absent and $t=-0.65$, $p=0.52$ when the performance cue is present). Therefore, a full mediation model is supported.

Additional Analyses

As a supplementary test, I ask participants to indicate the extent they expect the analyst's forecast to be accurate. Participants' ratings are lower when the forecast is provided by a non-exposed and non-All-Star analyst (mean=5.23) relative to other types of analyst (mean for "high exposure + performance cue absent" / "zero exposure + performance cue present" / "high exposure + performance cue present" condition =5.76/6.00/5.83, p=0.09/0.03/0.06). This supports my prediction that participants have higher expectation on the performance of the analyst when the analyst has prior high exposure and/or is an All-Star analyst.[38]

Test of Hypothesis 2

Effects of Exposure and Forecast Error Direction on Investors' Judgments

Hypothesis 2 predicts that in the absence of a performance cue, when the analyst forecast is inaccurate, investors will lower their perceived analyst credibility to a greater extent for the highly-exposed analyst than for the non-exposed analyst. The effect of exposure is stronger when the analyst makes an optimistic error (versus a pessimistic error). Panel A of Table 7 summarizes the mean changes in participants' perceived analyst credibility for all four conditions.

[38] No significant difference is found in investors' evaluations on the likelihood that the analyst was intentionally misguiding the market (smallest p=0.18).

TABLE 7: Changes in Perceived Analyst Credibility after the Actual Earnings Release

Panel A: Mean (Standard Deviation) Changes in Perceived Analyst Credibility[a]

	Error Direction[c]		
Exposure[b]	**Optimistic (Actual=$0.16)**	**Pessimistic (Actual=$0.24)**	**Row Mean**
Zero	-0.57 (1.27) N=22 [Condition 1]	0.21 (1.18) N=21 [Condition 5]	-0.19 (1.27) N=43
High	-1.36 (1.15) N=21 [Condition 2]	-0.27 (1.66) N=23 [Condition 6]	-0.79 (1.53) N=44
Column Mean	-0.95 (1.26) N=43	-0.04 (1.46) N=44	

Panel B: ANOVA Results (DV= Changes in Perceived Analyst Credibility)

Source	df	Mean Square	F	p-value (two-tailed)
Intercept	1	21.37	11.91	0.00
Exposure	1	8.84	4.93	0.03
Direction	1	18.93	10.55	0.00
Exposure × Direction	1	0.50	0.28	0.60

TABLE 7 (Continued)
Changes in Perceived Analyst Credibility after the Actual Earnings Release

Panel C: Planned Contrast Tests

Source	df	Mean Square	F	p-value (two-tailed)
Contrast [Hypothesis 2] [d]	1	24.17	13.31	<0.01
Contrast: Effect of exposure when the analyst forecast error is optimistic	1	6.69	3.68	0.06
Contrast: Effect of exposure when the analyst forecast error is pessimistic	1	2.55	1.40	0.24

[a] Changes in perceived analyst credibility are computed as the revised perceived analyst credibility after the actual earnings announcement minus the perceived analyst credibility before the actual earnings announcement.

[b] Exposure to the analyst's name is manipulated between-subjects as either zero exposure or high exposure. In the zero exposure condition, the analyst's name mentioned in the press release never appears in the previous visual study. In the high exposure condition, the analyst's name appears 6 times in the previous visual study.

[c] Holding performance cue as absent and the magnitude of forecast error as constant (4 cents), error direction is manipulated as between-subjects as either optimistic or pessimistic. In the optimistic (pessimistic) error condition, participants receive the actual earnings release for Theta's third quarter earnings as $0.16 ($0.24).

[d] Contrast weights are -1 in the "zero exposure + optimistic error" condition, -3 in the "high exposure + optimistic error" condition and +2 in the two "pessimistic error" conditions. Results are consistent with Hypothesis 2. When the analyst makes a forecast error, investors will lower their perceived analyst credibility to a greater extent for the highly-exposed analyst than the non-exposed analyst, with the effect magnified when the analyst forecast error is optimistic.

To test Hypothesis 2, I use the change in perceived analyst credibility after the actual earnings release as the main dependent variable, exposure and error direction as independent variables. ANOVA results shown in Table 7 Panel B indicate that there is a significant main effect of error direction (F=10.55, two-tailed p<0.01), a significant main effect of exposure (F=4.93, two-tailed p=0.03) and an insignificant interaction effect (F=0.28, two-tailed p=0.60). As to the change in perceived analyst relative credibility compared to peers, I find significant main effects of exposure (F=3.35, two-tailed p=0.07) and error direction (F=11.15, two-tailed p<0.01) and significant interaction effect of exposure and error direction (F=4.16, two-tailed p=0.05). [39]

To provide some evidence about the baseline comparison, I do one-sample t-tests to check the sign of changes in perceived analyst credibility to assess whether investors revise the perceived analyst credibility *downwards* after knowing that the analyst's forecast is inaccurate. Results suggest that when the analyst makes a pessimistic error, the changes in perceived analyst credibility are not significantly different from zero, no matter the analyst is zero-exposed (t=0.83, two-tailed p=0.42) or the analyst is highly-exposed (t=-0.79, two-tailed p=0.44). In contrast, when the analyst makes an optimistic error, participants significantly revise their perceived analyst credibility downwards for both the

[39] The scaled changes in perceived analyst credibility by participants' initial credibility rating indicate similar results as well (mean scaled changes in "zero exposure + optimistic error"/"high exposure + optimistic error"/ "zero exposure + pessimistic error"/ "high exposure + pessimistic error" condition = -0.10/-0.25/0.11/-0.03 for perceived absolute credibility and 0.07/-0.24/0.05/0.01 for perceived relative credibility).

non-exposed analyst (t=-2.11, two-tailed p=0.05) and the highly-exposed analyst (t=-5.40, two-tailed p<0.01).

My prediction on Hypothesis 2 is an ordinal interaction, and contrast coding is a more powerful approach to test the ordinal predictions (Buckless and Ravenscroft 1990). Accordingly, I use the contrast weight +2 in the two pessimistic error conditions, -1 in the "zero exposure + optimistic error" condition and -3 in the "high exposure + optimistic error" condition. As shown in Panel C of Table 7, the planned contrast is statistically significant (F=13.31, two-tailed p<0.01), consistent with Hypothesis 2.[40] Additional contrast tests show that when the analyst forecast error is optimistic, participants lower the credibility ratings (mean=-1.36) to a greater extent for the highly-exposed analyst than they do for the non-exposed analyst (mean=-0.57, two-tailed p=0.06). In contrast, when the analyst forecast error is pessimistic, exposure has no significant effect on changes in perceived analyst credibility (two-tailed p=0.24). Participants significantly lower their perceived analyst reputation when the highly-exposed analyst makes an optimistic error (mean=-1.43) relative to other conditions (mean for "zero exposure + optimistic error"/ "zero exposure + pessimistic error" / "high exposure + pessimistic error" condition =-0.73/0.52/-0.23, p=0.07/<0.01/0.01).[41]

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[40] I also test the contrast weight +2 in the "zero exposure + pessimistic error" condition, +1 in the "high exposure + pessimistic error" condition, 0 in the "zero exposure + optimistic error" condition, and -3 in the "high exposure + optimistic error" condition, the contrast is significant (F=14.81, two-tailed p<0.01).

[41] When the highly-exposed analyst makes an optimistic error, participants increase their ratings that the analyst is more likely to provide misguiding forecast intentionally to a greater extent (mean=0.93) compared to other conditions (mean for "zero exposure + optimistic error"/ "zero

The same contrast weights (-1/-3/+2/+2 for the "zero exposure + optimistic error"/"high exposure + optimistic error"/ "zero exposure + pessimistic error"/ "high exposure + pessimistic error" condition) are used to test the change in perceived analyst relative credibility. The planned contrast is significant (F=15.75, two-tailed p<0.01). Specifically, when the analyst makes an optimistic error, participants significantly lower their perceived analyst relative credibility to a greater extent for the highly-exposed analyst (mean=-13.38) than they do for the non-exposed analyst (mean=-2.36, F=7.23, two-tailed p<0.01). In contrast, when the analyst makes a pessimistic error, exposure does not significantly influence the change in perceived relative credibility (mean=1.33/1.93 for the zero-exposed/ highly-exposed analyst respectively, F=0.02, two-tailed p=0.88). The mean changes in perceived analyst relative reputation are significantly more negative for the highly-exposed analyst who makes an optimistic error (mean=-11.25) than the non-exposed analyst who makes the similar error (mean=-3.09, p=0.05). When the analyst makes a pessimistic error, the mean changes in perceived analyst relative reputation are not significantly different for the highly-exposed analyst and the non-exposed analyst (mean=1.24/2.09 for highly-exposed/non-exposed analyst, p=0.43).

Following Kenny et al. (1998), I examine whether participants' earnings- and investment- related judgments after the actual earnings release and their willingness to rely on the analyst's future report are mediated by the change in perceived credibility ratings. I add the change in perceived credibility ratings as

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exposure + pessimistic error" / "high exposure + pessimistic error" condition =-0.41/0.10/-0.59, p=0.02/0.09/0.01).

a covariate to the regression analyses. After controlling for the manipulated factors and participants' initial ratings and the ratings before the actual earnings release, regression results suggest that participants' changes in investment intention and willingness to rely on the analyst's future report are positively associated with their changes in perceived analyst credibility (two-tailed $p=0.02/<0.01$ for investment/reliance measures respectively). No significant effect is found for participants' full-year earnings estimates (two-tailed $p=0.26$). [42] Sobel test results are significant for the change in investment intention ($z=1.98$, $p=0.05$) and the change in willingness to rely on the analyst's future report ($z=3.07$, $p<0.01$), indicating the mediation is significant. [43]

In sum, evidence generally indicates that the independent variables influence the change in perceived analyst credibility, which further affects participants' changes in their investment intention and willingness to rely on the analyst's report in the future.

Other Judgments after the Actual Earnings Release

In order to assess participants' affective reactions to the analyst's forecast error, I also ask participants to evaluate the extent of their disappointment and satisfaction. Disappointment (Mellers et al. 1997) and satisfaction (Locke 1976) measure the participants' emotional state reflecting an affective response to a

[42] I find that the change in perceived analyst credibility mediates the change in investors' confidence in their earnings estimates (two-tailed $p<0.01$).
[43] For the change in investment intention and willingness to rely on future analyst reports, the significance level of the contrast test reduces after controlling the changes in perceived analyst credibility, suggesting partial mediation.

situation. Factor analysis suggests the disappointment and satisfaction variables reflect a single underlying factor (Cronbach's Alpha=-0.81). I combine these two variables by reverse-coding the disappointment variable and taking the average of the two as one aggregate satisfaction measure. [44] ANOVA test indicates a marginally significant interaction effect (F=2.96, two-tailed p=0.09), a significant main effect of error direction (F=10.04, two-tailed p<0.01) and an insignificant main effect of exposure (F=0.15, two-tailed p=0.70). Pairwise comparisons show that when the analyst makes an optimistic error, participants are less satisfied with the highly-exposed analyst (mean=4.76) than the non-exposed analyst (mean=5.45, p=0.07). There is no significant difference in participants' satisfaction on the highly-exposed analyst and the non-exposed analyst when the analyst makes a pessimistic error (mean for the zero/high exposure condition=5.93/6.36, p=0.18). Untabulated regression analysis indicates that this satisfaction measure mediates the effect of exposure and forecast error direction on the change in perceived analyst credibility (two-tailed p<0.01 for the satisfaction covariate). This provides evidence that the affective mechanism mediates the credibility results.

To examine participants' attribution of the analyst's forecast error, participants are asked to rank a list of internal and external factors responsible for causing the analyst's forecast error (1: most likely cause; 5: least likely cause). Similar to Kadous et al. (2009), I calculate composite net internal attribution score as the average rank for the two internal factors (ability and

[44] When the factor score is used as the measure of satisfaction, results are similar.

effort) and then subtract the average rank for the three external factors (luck, stability of economic environment, and earnings volatility). If the score is greater than 0 (i.e. average rank for internal factors is higher than that for external factors), it suggests participants perceive that internal factors are *less* likely to cause the forecast error. One-sample t-test suggests that this was the case (mean=0.87, t=5.51, p<0.01). Detailed analysis shows that, in general, participants rank the unstable external environmental condition during the period to be the most likely cause for the inaccurate analyst's earnings forecast (mean=1.84) while luck and two internal factors like hard work and ability are least likely causes (mean=3.72, 3.65 and 3.38, respectively). When the non-exposed analyst makes a pessimistic forecast error, participants are more likely to make external attributions compared to other three conditions (mean=1.67, compared to mean for the "zero exposure + optimistic error"/"high exposure +optimistic error"/ "high exposure + pessimistic error" condition =0.46/0.94/0.45, largest p=0.05 for pairwise comparisons). No differences among the other three conditions are found (smallest p=0.13). I add the internal attribution measure as a covariate to the regression on the change in credibility measures. After controlling for exposure and error direction, the coefficient for the attribution covariate is significant (two-tailed p=0.03). This suggests that both affective reactions (such as satisfaction and disappointment) and cognitive attributions may explain the credibility results.[45]

[45] I also assess participants' perceptions on the final earnings forecast a randomly selected analyst will provide when his initial opinion ($0.35) conflicts with the consensus forecast ($0.30). The purpose of this question is to assess participants' general belief of individual

Additional Test about the Effect of Exposure when an All-Star Analyst Makes an Optimistic Error

Participants in the performance cue present condition receive the actual earnings which imply an optimistic analyst forecast error. As an additional test, I find that when an All-Star analyst makes an optimistic forecast error, exposure has no significant effect on the change in perceived analyst credibility (mean=-0.89 and -1.17 for the non-exposed analyst and the highly-exposed analyst respectively, p=0.23) and perceived analyst relative credibility (mean=-9.50 and -10.71 for the non-exposed analyst and the highly-exposed analyst respectively, p=0.40). I do a contrast test with the weight +3 in "zero exposure + performance cue absent" condition and -1 in "high exposure + performance cue absent", "zero exposure+ performance cue present" and "high exposure + performance cue present" conditions. The contrast tests are significant for the change in perceived analyst credibility measure (F=3.20, two-tailed p=0.08) and relative credibility measure (F=5.14, two-tailed p=0.03). These results suggest that participants revise their credibility ratings on the highly-exposed and/or All-Star analyst downwards to a greater extent than the non-exposed analyst when the analyst makes an optimistic error. The change in perceived analyst reputation also shows the similar pattern. When the analyst who makes

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analyst's tendency to herd towards the consensus forecast. On average, investors think that the analyst will provide the EPS forecast $0.32, which lies between the original belief $0.35 (t=-8.72, p=0.00) and the consensus forecast $0.30 (t=4.88, p=0.00). No main effects of exposure, direction of error or interaction effect are found (smallest p=0.32). Including this measure in the previous analysis as a control variable has no significant effect on the main dependent variables and results for the manipulated factors are similar.

an optimistic error is an All-Star analyst, participants lower their perceived analyst reputation to a same extent for the non-exposed analyst (mean=-0.89) and the highly-exposed analyst (mean=-1.13, p=0.27). Similarly, there is no significant difference in the change in perceived analyst relative reputation (mean=-10.55 and -10.50 for the non-exposed analyst and the highly-exposed analyst respectively, p=0.49).

Next, I compare the change in participants' perceptions in the "high exposure + performance cue absent" condition with that in the "zero exposure +performance cue present" condition. When the analyst makes an optimistic error, compared to the highly-exposed analyst, the All-Star analyst experiences a similar drop in perceived analyst credibility (p=0.12/0.22 for absolute/relative credibility measures) and perceived analyst relative reputation (p=0.45). However, in terms of the change in the perceived analyst absolute reputation, it suggests that the reputation of All-Star analyst decreases marginally less than that of the highly-exposed analyst (p=0.08).

In sum, these results further support the substitutive effects of exposure and performance. As shown in the analysis for Hypothesis 1, either prior exposure or the award status of the analyst can increase perceived analyst credibility. Exposure has no incremental effect in the presence of a performance cue. The substitutive effects also extend to the situation when the actual performance of the analyst is known.

CHAPTER V:

CONCLUSION

This study examines whether and how the prior repeated exposure of the analyst's name affects investors' reactions to the analyst's earning forecast. Results suggest that in the absence of a performance cue, mere repeated exposure of analyst's name increases the perceived analyst credibility, which subsequently influences investors' earnings estimates and investment intentions. I find that investors' exposure to the analyst's name has no incremental effect on investors' perceived analyst credibility and earnings estimates when the analyst's performance cue is present.

In addition, I examine the effects of exposure and the forecast error direction when the analyst's earning forecast is inaccurate. I find that investors punish the highly-exposed analyst more than the non-exposed analyst in terms of perceived analyst credibility, and this effect is magnified when the analyst's forecast error is optimistic. Both affection and attribution factors explain these results.

My study contributes to the literature in that it provides evidence that one effect of media coverage, exposure to the analyst's name, on the investors' judgment and decision making process. I extend prior studies (Bonner et al. 2007) in that I separate out the effects of prior exposure to the analyst's name and performance cue on investors' reactions to the analyst forecast. Prior

exposure to the analyst name increases investors' perceptual fluency and the familiarity with the analyst's name. When the performance cue about the analyst is absent or not highly accessible in the investors' memory, investors use familiarity with the name as a heuristic for their judgments on the analyst and the company's earnings. I extend Hugon (2004) in that I focus on the exposure of earnings-irrelevant information. Although the name has no bearing on the quality of the analyst forecast and the company's earnings, the perceptual fluency for the name enhances investors' perceived analyst credibility and the subsequent judgments.

In addition, this paper has practical implications. I provide evidence on how analysts develop and maintain their professional reputation. Exposure effect suggests that analysts can enhance his/her market influence and personal image by merely increasing the media exposure of his/her name, perhaps by increasing the mention of their names in newspapers or magazines, being more active during the conference calls, or maintaining a good relationship with the media. However, this kind of image-enhancement approach may be also risky, especially when the analyst actually makes an optimistic error. Compared to the non-exposed analyst, the highly-exposed analyst suffers a larger drop in terms of his perceived credibility if he/she makes an optimistic forecast error.

Several limitations of the study should be noted. One limitation of this study is that I only focus primarily on the exposure frequency of the analyst's name. One important feature accompanying the analyst's name is the brokerage firm to which the analyst affiliated. It is possible that a well-known brokerage firm

may influence the exposure effect of an individual analyst. A related limitation is that my exposure manipulation (focusing only on the analyst's name) is potentially more salient than what happens in reality (where other information cues accompany the analyst's name). I note that Bonner et al.'s (2007) findings of a significant impact of analysts' media exposure suggest that the exposure effect is significant in practice, possibly because people can automatically encode the frequency information with minimal attentional resources (Hasher and Zacks 1979; Zacks et al. 1982). The second limitation of the current study is that in the zero exposure conditions, the analyst's name is totally unknown to the investors. In other words, I manipulate the absence/presence of exposure instead of varying the levels of exposure. The explanation of the results is subject to this caveat. Also, in the high exposure conditions, the target analyst's name is repeated six times. Six mentions is not comparable to the mean amount of media mention per year in the sample of Bonner et al. (2007), but it is slightly below the first quartile (first quartile equals 7 and mean equals 49 as shown in Table 1, Bonner et al. 2007, 489). Although the purpose of this manipulation is to propose a strategy for analysts to enhance their credibility, if investors process the media coverage frequency information over the same time period as Bonner et al (2007) use, which is a year, the results of this paper may not speak to most of the analyst population.

Third, the press release used in the experiment is very short (36 words), which likely enables participants to more easily acquire the analyst's name, the

performance cue about the analyst and the earnings estimates. [46] The explanation of the results is subject to this caveat. Fourth, in my experiment, the performance cue and the analyst's name are presented simultaneously. While I find that some press releases report these simultaneously, others do not. My results are subject to the caveat that in the performance cue present condition, the award status of the analyst is quite salient because it is juxtaposed with analyst's name. Finally, in this study, individual differences of investors are eliminated by randomization. Future research may investigate the role of investors' knowledge and ability in the exposure effect. Novice investors may be more likely to suffer the exposure effect than the knowledgeable or experienced investors.

[46] I randomly select an analyst from the analyst list in Yahoo! Finance (Mark Bachman) and count the words of all news articles mentioned this analyst in the past year (October 1, 2009 to September 30, 2010) from Factiva database. The average number of word is 3805(standard deviation equals 5004). Detailed analysts suggest that among these 30 news articles, 11 articles relate to companies' earnings conference calls, with an average of 9626 words (standard deviation equals 3693). The mean number of words for the remaining 19 articles is 436 (standard deviation equals 284).

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APPENDICES: EXPERIMENTAL MATERIALS

APPENDIX A: VISUAL STUDY

GENERAL INSTRUCTIONS

STUDY 1 relates to your **VISUAL MEMORY**.

Please pay attention to those 20 slides. On each of the slide, there is **a randomly selected name** (First name plus last name). All you need to do is to look into the middle of the projector screen as the names are presented. You will be asked some questions after the slide show.

If you have any question about the study, please raise your hand NOW. You can also ask the researcher after the slide show.

At this point, please focus on the screen.

Please DO NOT turn to next page for the questions BEFORE the end of the slide show.

SLIDE SHOW

[FOR PARTICIPANTS IN THE "ZERO EXPOSURE" CONDITION]
(20 slides with 9 names, exposure duration=2s; Target Name = **Devon Fraley** + **0 time; Kirby Sikora replaces Devon Fraley)**

"Norbert Grimm -- **Kirby Sikora** -- Vaughn Purvis -- Hiram Trejo -- Maynard Hirsch -- Genaro Adair -- **Kirby Sikora** -- Norbert Grimm -- Leonel Gillen -- Alvaro Jarrell -- **Kirby Sikora** -- Hollis Welker -- Hiram Trejo -- **Kirby Sikora** -- Vaughn Purvis -- **Kirby Sikora** -- Genaro Adair -- Alvaro Jarrell -- **Kirby Sikora** -- Maynard Hirsch"

[FOR PARTICIPANTS IN THE "HIGH EXPOSURE" CONDITION]
(20 slides with 9 names, exposure duration=2s; Target Name = **Devon Fraley** + **6 times**; 9 names except **Kirby Sikora)**

"Norbert Grimm -- **Devon Fraley** -- Vaughn Purvis -- Hiram Trejo -- Maynard Hirsch -- Genaro Adair -- **Devon Fraley** -- Norbert Grimm -- Leonel Gillen -- Alvaro Jarrell -- **Devon Fraley** -- Hollis Welker -- Hiram Trejo -- **Devon Fraley** -- Vaughn Purvis -- **Devon Fraley** -- Genaro Adair -- Alvaro Jarrell -- **Devon Fraley** -- Maynard Hirsch"

Question 1

According to your memory, what's the name shown in the **first** slide? *(Please tick one.)*

- ☐ Norbert Grimm
- ☐ Maynard Hirsch
- ☐ Hiram Trejo
- ☐ Vaughn Purvis
- ☐ Leonel Gillen

Question 2

According to your memory, what's the name shown in the **last** slide? *(Please tick one.)*

- ☐ Norbert Grimm
- ☐ Maynard Hirsch
- ☐ Hiram Trejo
- ☐ Vaughn Purvis
- ☐ Leonel Gillen

Now you have finished STUDY 1.

Please put aside the materials for STUDY 1 and continue to STUDY 2.

APPENDIX B: EARNINGS FORECAST STUDY – BACKGROUND INFORMATION

GENERAL INSTRUCTIONS

In STUDY 2, we would like you to analyze the enclosed case as an investor. The case relates to a listed company. In order to avoid having the name of the company influence your decisions, we have changed the name and called it Theta Inc. While not all the information that you would normally desire will be made available to you due to time constraints, it is important that you perform your analysis to the best of your abilities given the limited information set.

Please read the background information about Theta. Then open Envelop A, answer the questions in Envelop A, and put the materials back into Envelop A before opening Envelop B. After you finish the questions in Envelop B, put the materials back into Envelop B and then open Envelop C.

Do not skip questions or move ahead to other pages before completing the earlier pages. Once you have answered a question, do not go back and change your responses to previous questions.

BACKGROUND INFORMATION

THETA INC.

BUSINESS

The Company's principal products are monolithic and discrete semiconductor devices and components, ceramic devices and components, and wireless communication devices.

The principal customers for these products are equipment manufacturers for commercial and defense microwave systems such as cellular telephones, commercial telecommunications, direct broadcast satellites, automotive collision avoidance applications and military applications.

CUSTOMERS AND DISTRIBUTION

The major customers of Theta's products are manufacturers of commercial products (primarily in the wireless communications markets) and also manufacturers of components for products such as wireless telephones and base stations in addition to motion detectors and sensors.

COMPETITIVE CONDITIONS

The principal competitive factors affecting the Company's business are product performance, price, applications support and adherence to delivery schedules. The Company faces competition from divisions of larger, more diversified organizations in the electronics industry with substantially greater assets and access to larger financial resources, as well as from many smaller specialized companies.

2004-2008 Five-Year Summary

FISCAL YEAR 2009 SELECTED FINANCIAL DATA **FIVE YEAR FINANCIAL SUMMARY** (In thousands, except per share amounts and financial ratios)					
FISCAL YEAR	**2008**	**2007**	**2006**	**2005**	**2004**
RESULTS OF OPERATION					
Sales	$123,739	$116,881	$85,253	$96,894	$78,254
Net income (loss)	15,931	10,302	(15,572)	3,794	2,847
Per share data					
Net income (loss) diluted	$0.75	$0.52	($0.79)	$0.21	$0.18
Weighted average common shares	21,037	20,024	19,696	17,502	15,764
FINANCIAL RATIOS					
Return (based on net income/net loss)					
On sales	13.0%	8.8%	(18.3%)	3.9%	3.6%
On average assets	14.9%	14.5%	(22.1%)	6.0%	6.0%
On average equity	23.9%	25.8%	(30.9%)	8.9%	11.0%
Current Ratio	3.12	2.52	2.10	3.35	1.68
Debt to Equity	0.9%	2.9%	8.3%	4.5%	17.1%
FINANCIAL POSITION					
Working Capital	$42,687	$26,061	$18,409	$32,647	$10,983
Additions to property, plant and equipment	17,730	11,039	7,951	12,297	5,248
Total assets	106,681	76,929	65,253	75,423	50,167
Long-term debt	713	1,625	3,606	2,565	4,744
Long-term capital lease obligations	--	--	8	565	754
Stockholders' equity	71,814	55,822	43,386	57,533	27,674
OTHER STATISTICS					
Net orders (net of cancellations)	126,500	121,100	81,300	103,200	84,900
Backlog at year end	$36,900	$36,800	$32,500	$36,500	$30,200

2007-2009 Quarterly Summary

FISCAL YEAR 2009					
QUARTERLY FINANCIAL DATA (In thousands except per share data)					
	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	YEAR
Fiscal 2009					
Sales	$38,605	$31,769			
Gross profit	17,105	12,413			
Net income	4,667	3,334			
Earnings per share	**0.22**	**0.16**			
Fiscal 2008					
Sales	$31,955	$29,026	$31,489	$30,269	$123,739
Gross profit	13,823	11,863	13,338	13,184	52,208
Net income	4,673	3,186	3,591	4,436	15,931
Earnings per share	**0.22**	**0.15**	**0.17**	**0.21**	**0.75**
Fiscal 2007					
Sales	$25,705	$28,571	$30,751	$31,854	$116,881
Gross profit	8,897	10,629	11,823	12,733	44,082
Net income	1,110	2,344	3,156	3,692	10,302
Earnings per share	**0.06**	**0.12**	**0.16**	**0.18**	**0.52**
Consensus Third Quarter EPS Forecast for FY 2009				**$0.18**	
Consensus Full Year EPS Forecast for FY 2009				**$0.80**	

Instructions:

Given Theta's background and financial information, please provide your following assessments.

Question 1

What is your assessment of Theta's earnings per share? (*fill in the blanks.*)

a) EPS forecast for the ***Third Quarter*** ending ***September 30, 2009*** : **$.**

b) EPS forecast for the ***Full Year*** ending ***December 31, 2009***: **$.**

How confident are you in the accuracy of the above forecasts? (*circle one number.*)

0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Extremely Low Confidence										**Extremely High Confidence**

Question 2

Please assess Theta's future earnings growth potential. *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Low Earnings Growth Potential										**Extremely High Earnings Growth Potential**

Question 3

Please assess the potential that Theta's stock price will appreciate over the next twelve months. *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Low Potential for Price Appreciation										**Extremely High Potential for Price Appreciation**

When you are done, please open envelope A. You may refer to the set of financial and background information whenever necessary. Please do not go back and change your responses to previous questions.

APPENDIX C: EARNINGS FORECAST STUDY – PRESS RELEASE ABOUT THE ANALYST'S EARNINGS FORECAST

Envelope A

On August 31, 2009, you receive the following ***press release*** *about the analyst's forecast for Theta's third-quarter earnings.*

[FOR PARTICIPANTS IN THE "PERFORMANCE CUE ABSENT" CONDITION]

Earnings Digest: Analyst Sees a Bright 3rd-quarter for Theta

Monday August 31, 2009 11:11am ET

NEW YORK -- Analyst, **Devon Fraley**, estimates Theta's earnings per share for the third-quarter ending September 30, 2009 will be **$0.20**.

[FOR PARTICIPANTS IN THE "PERFORMANCE CUE PRESENT" CONDITION]

Earnings Digest: Analyst Sees a Bright 3rd-quarter for Theta

Monday August 31, 2009 11:11am ET

NEW YORK – **Wall Street Journal All-star analyst, Devon Fraley**, estimates Theta's earnings per share for the third-quarter ending September 30, 2009 will be **$0.20**.

[The Wall Street Journal publishes its All-star analyst list each year. The survey ranks analysts according to how well they pick stocks and how well they predict earnings for the companies they cover.]

Instructions:

Given the analyst's earnings forecast about Theta, please provide your following assessments.

Question 1

What is your assessment of Theta's earnings per share? (*fill in the blanks.*)

a) EPS forecast for the ***Third Quarter*** ending ***September 30, 2009***: $____.____

b) EPS forecast for the ***Full Year*** *ending* ***December 31, 2009***: $____.____

How confident are you in the accuracy of the above forecasts? (*circle one number.*)

0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Extremely Low Confidence										**Extremely High Confidence**

Question 2

Please assess Theta's future earnings growth potential. *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Low Earnings Growth Potential										**Extremely High Earnings Growth Potential**

Question 3

Please assess the potential that Theta's stock price will appreciate over the next twelve months. *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Low Potential for Price Appreciation										**Extremely High Potential for Price Appreciation**

Question 4

To what extent would you be willing to rely on the earnings report provided by the analyst in the press release in the future? *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Unwilling to rely on the report										**Extremely Willing to rely on the report**

Question 5

To what extent do you think the analyst in the press release is

a) competent.

0	1	2	3	4	5	6	7	8	9	10
Not at all competent										**Extremely competent**

b) trustworthy.

0	1	2	3	4	5	6	7	8	9	10
Not at all trustworthy										**Extremely trustworthy**

c) reputable.

0	1	2	3	4	5	6	7	8	9	10
Not at all reputable										**Extremely reputable**

Question 6

Suppose the analyst in the press release is one among 100 randomly selected analysts. In your opinion, the analyst in the press release is

a) more competent than _____of these analysts. (*Write a number between 0 and 100.*)

b) more trustworthy than _____of these analysts. (*Write a number between 0 and 100.*)

c) more reputable than _____of these analysts. (*Write a number between 0 and 100.*)

Question 7

To what extent do you expect the analyst's earnings forecast in the press release to be accurate? *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Low Expectation										**Extremely High Expectation**

Question 8

To what extent do you think the analyst's earnings forecast in the press release is believable? *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Low Believability										**Extremely High Believability**

Question 9

Do you think it is likely that the analyst in the press release is intentionally misguiding the market? *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Unlikely										**Extremely Likely**

Question 10

To what extent is the consensus forecast important in making your earnings predictions? *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Unimportant										**Extremely Important**

Question 11

To what extent is the specific forecast made by the analyst in the press release important in making your earnings predictions? *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Unimportant										**Extremely Important**

Now you have finished question set A, please put them back into the envelope provided and put it aside. Please do not open Envelop A from now on. After that, please open the envelope marked 'B' and answer the questions.

APPENDIX D: EARNINGS FORECAST STUDY – ACTUAL EARNINGS RELEASE

Envelope B

[FOR PARTICIPANTS IN THE "OPTIMISTIC ERROR" CONDITION]

On October 14, 2009, Theta announces that the earnings per share for the third-quarter ending September 30, 2009 are ***$0.16****.*

[FOR PARTICIPANTS IN THE "PERFORMANCE CUE ABSENT" CONDITION]

Recall that on August 31, 2009, analyst Devon Fraley's forecast for Theta's third-quarter earnings per share was $0.20, $0.04 *higher* than the actual earnings.

[FOR PARTICIPANTS IN THE "PERFORMANCE CUE PRESENT" CONDITION]

Recall that on August 31, 2009, Wall Street Journal All-Star analyst Devon Fraley's forecast for Theta's third-quarter earnings per share was $0.20, $0.04 *higher* than the actual earnings.

[FOR PARTICIPANTS IN THE "PESSIMISTIC ERROR" CONDITION]

On October 14, 2009, Theta announces that the earnings per share for the third-quarter ending September 30, 2009 are ***$0.24****.*

Recall that on August 31, 2009, analyst Devon Fraley's forecast for Theta's third-quarter earnings per share was $0.20, $0.04 *lower* than the actual earnings.

Instructions:

Given Theta's actual earnings information, please provide your updated assessments.

Question 1

What is your assessment of Theta's earnings per share? (*fill in the blank.*)

EPS forecast for the ***Full Year*** ending ***December 31, 2009***: **$____._____**

How confident are you in the accuracy of the above forecasts? (*circle one number.*)

0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Extremely Low Confidence										**Extremely High Confidence**

Question 2

Please assess Theta's future earnings growth potential. *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Low Potential										**Extremely High Potential**

Question 3

Please assess the potential that Theta's stock price will appreciate over the next twelve months. *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Low Potential for Price Appreciation										**Extremely High Potential for Price Appreciation**

Question 4

To what extent would you be willing to rely on the earnings report provided by the analyst in the press release in the future? (*circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Unwilling to rely on the report										**Extremely Willing to rely on the report**

Question 5

To what extent do you think the analyst in the press release is

a) competent.

0	1	2	3	4	5	6	7	8	9	10
Not at all competent										**Extremely competent**

b) trustworthy.

0	1	2	3	4	5	6	7	8	9	10
Not at all trustworthy										**Extremely trustworthy**

c) reputable.

0	1	2	3	4	5	6	7	8	9	10
Not at all reputable										**Extremely reputable**

Question 6

Suppose the analyst in the press release is one among 100 randomly selected analysts. In your opinion, the analyst in the press release is

a) more competent than _____of these analysts. (*Write a number between 0 and 100*)

b) more trustworthy than _____of these analysts. (*Write a number between 0 and 100*)

c) more reputable than _____of these analysts. (*Write a number between 0 and 100*)

Question 7

Do you think it is likely that the analyst in the press release is intentionally misguiding the market? *(circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Unlikely										**Extremely Likely**

Please give your assessments about the actual earnings forecast accuracy of the analyst in the press release in Question 8-10.

Question 8

To what extent are you surprised by the analyst's actual earnings forecast accuracy? (*circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Not Surprised										**Extremely Surprised**

Question 9

To what extent are you disappointed with the analyst's actual earnings forecast accuracy? (*circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Not Disappointed										**Extremely Disappointed**

Question 10

To what extent are you satisfied with the analyst's actual earnings forecast accuracy? (*circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Unsatisfied										**Extremely Satisfied**

Question 11

Please rank the importance of the following possible factors which may cause the analyst's inaccurate earnings forecast from "1" the most likely cause to "5" the least likely cause). (*Write one number in each blank.*)

Rank	
	The analyst has low ability.
	The analyst is unlucky.
	The environmental condition is unstable during the period.
	Theta's earnings are volatile.
	The analyst didn't work hard enough.

Question 12

Assume that on May 31, a randomly selected analyst estimated that the company's EPS for the quarter ended June 30 would be $0.35, which was $0.05 ABOVE the current consensus forecast of $0.30. If the analyst decided to issue a revised earnings forecast in the form of a point estimate, what EPS amount would you expect the analyst to provide? (fill in the blank.)

$_____

Now you have finished question set B, please put them back into the envelope provided and put it aside. Please do not open Envelop B from now on. After that, please open the envelope marked 'C' and answer the questions.

APPENDIX E: MANIPULATION CHECKS AND POST-EXPERIMENTAL QUESTIONAIRE

Envelope C

[FOR PARTICIPANTS IN ALL CONDITIONS]

Question 1a

Did the **press release** on August 31, 2009 about the analyst's forecast for Theta's third-quarter earnings mention the specific analyst's name? (*Please tick one.)*

☐ NO

☐ NOT SURE

☐ YES

Question 1b

To what extent did the analyst's name in the press release on August 31, 2009 sound familiar to you? (*circle one number.)*

0	1	2	3	4	5	6	7	8	9	10
Extremely Unfamiliar										**Extremely Familiar**

Question 2

Did the **press release** on August 31, 2009 about the analyst's forecast for Theta's third-quarter earnings mention that the analyst is **a Wall Street Journal All-star analyst**? (*Please tick one.)*

☐ NO ☐ NOT SURE ☐ YES

Question 3

The analyst's earnings forecast in the press release turned out to be _____ Theta's actual earnings for the third-quarter of 2009. (*Please tick one.)*

☐ *Above*

☐ *Below*

☐ *Equal to*

Question 4

You are about to complete Study 2 (Earnings Forecast Study). Now, in Study 1 (Visual Study) you completed **before** Study 2, how many times have you seen the name "Devon Fraley" (*Please tick one.)*

☐ NONE ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ NOT SURE

In the next part, you will be asked about some background information.

Background Information

Please answer the following questions.

A. How many years of full time working experience do you have? *(fill in the blanks.)*
_____ years and____months

B. Have you ever invested in the stock market? (*circle one.*) YES / NO

If your answer is "YES," how many times have you done that? _____ times
If your answer is "NO," do you intend to do it in the future? YES / NO

C. Have you ever invested in mutual funds that invest in a portfolio of stocks? *(circle one.)*
YES / NO

If your answer is "YES," how many times have you done that? _____ times
If your answer is "NO," do you intend to do it in the future? YES / NO

D. In the space below, indicate the number of courses you have taken (including undergraduate and graduate courses you are currently enrolled) in: *(fill in the blanks.)*

Accounting: _____ courses
Finance: _____ courses

Now you have finished all sections of STUDY 2. Please put them back into the Envelope C and return all envelopes to the researcher.

Thank you very much for your participation!

APPENDEX F: EXAMPLES OF PRESS ARTICLES MENTIONING THE ANLAYST'S NAME

Example 1:

Auriga Downgrades Solarfun Power (SOLF) to Hold
8 October 2010
StreetInsider.com

Auriga downgrades Solarfun Power (Nasdaq: SOLF) from Buy to Hold, saying rising input prices (poly, wafer, cell, glass, back sheet) could lead to gross margin headwind. Shares are also trading near the firm's $13 price target.

Analyst Mark Bachman said, "Specifically, our model calls for ~19% gross margins in both Q3 and Q4, while the consensus estimates incorporate gross margins of 22% over the same timeframe - a 300 basis point discrepancy. While we expect positive comments with regard to both shipments and pricing, we believe the SOLF may be susceptible to higher input prices, thus affecting COGS, and ultimately EPS. We have tweaked our model slightly higher in the near term, but have kept our 2011 assumptions unchanged. Further clarity on ramping additional capacity next year could help raise our 2011 estimates and would allow us to be more constructive on the stock in the future. But in the short term, we find it prudent to step aside until the consensus expectations are re-evaluated."

Example 2:

Event Brief of Q2 2010 Canadian Solar Inc. Earnings Conference Call - Final
2 September 2010
CQ FD Disclosure

...
OPERATOR: And our next question comes from the line of **Mark Bachman** of Auriga. Mark, you may proceed.

MARK BACHMAN, ANALYST, AURIGA: Sure, good evening, gentlemen. Just a quick question here, Q2 closed two months ago and you gave guidance just two weeks ago on August 19, but yet you were able to exceed shipment guidance -- or your shipments. Can you explain how that's possible?

DR. SHAWN QU: Yes, that's because our conservative accounting practice. We have made a sales return reserve and in the past two quarters, which are the products we already shipped, and then depend on the cash collection and new evidence and we recognize those sales in future quarters. And after we reviewed the situation we recognized more of those sales return reserves into sales in Q2, that's why the number went up.

MARK BACHMAN: So, Shawn, just to be clear there, you're saying then in the last two weeks, you actually were able to recognize almost another 6 gigawatts worth of product?

DR. SHAWN QU: No, it's no. All the products shipped are in Q2 already, but we performed our Q2 closing and review after we finished our 20-F in Q1 and during that review process we look at the sales reserves, which are the product we already shipped in Q1, and then we look at all the criteria in the US GAAP to determine whether they meet all the most restricted requirements for sales recognition. And once we finished those review we decide how much will be recognized in Q2. And when we give a guidance we only look at the Q2 actual shipment and that's why the number went up during the review process.

MARK BACHMAN: Okay. And then just a last question here for Arthur. Arthur, can you give us an idea on foreign currency, where do you expect your foreign currency gain or loss to come out in Q3?

ARTHUR CHIEN: In Q3 we expect some foreign currency gain. Basically, the reason is we have applied some hedging contracts there and also the euro sort of comes back a little bit from bottom line. So, in Q3 we'll have exchange gain.

...

Example 3: [47]

Lockheed Martin's New CEO Facing Tough Challenge
Renae Merle
8 March 2004
The Washington Post

Robert J. Stevens, who will become chief executive of Lockheed Martin Corp. in August, faces the tough task of building upon the transformation that his predecessor wrought at the $32 billion Bethesda defense firm.

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[47] It is noted that Example 3 and Example 5 mention the same analyst (Robert Friedman). However, his star status is mentioned in Example 5 but not in Example 3. In other words, even for all-star analysts, sometimes his/her award status is mentioned with his/her name, but sometimes isn't.

Stevens is taking over from Vance D. Coffman as a rising federal budget threatens to slow defense spending, Pentagon views of high-tech warfare shift and Lockheed continues to have problems with two high-profile programs: the F/A-22 and F-35 fighter jets.

"I would caution investors not to take too much stock in Bob Stevens ascending to the CEO post," said **Robert Friedman**, aerospace and defense equity analyst for Standard & Poor's Equity Research Services. "Anyone who steps into the CEO post is still going to have a tall order to fill."

Stevens has said Lockheed's information technology capabilities -- including software that links fighter pilots and ground troops, processing centers for government checks and database integration -- are central to the firm's future. About 25 percent of Lockheed's revenue last year -- $8 billion -- came from information technology services, a company spokesman said. It is "the fastest-growing segment of our business," Stevens said last month.

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Example 4:

All-Star Analyst Arnie Ursaner Issues Recommendations for 5 Stocks: GY, MIMS, KROL, EME and TARO
11 April 2002
PR Newswire

CHICAGO, April 11 /PRNewswire/ -- Sometimes size does matter. In the case of 5-star analyst Arnie Ursaner, he used small cap stocks to generate a 168% return in 2001. See what small cap companies Arnie is following in 2002.
Here are the details on Analyst Allan Hickok's Stock Picks for today:
The following 5 Small Cap companies are big on Ursaner's list for 2002:

GenCorp (NYSE: GY) GY is organized into three business segments: GDX Automotive, Aerospace and Defense, and Fine Chemicals.

Ursaner sees an EPS jump of 25% or more in 2003, before any potential debt reduction with the excess free cash or realizations from the sale of land. His 12-month price target is $18.

MIM Corporation (Nasdaq: MIMS) is a pharmacy benefit management, specialty pharmaceutical and fulfillment and e-commerce organization that partners with healthcare providers and sponsors to control prescription drug costs.

MIM is developing the reputation as a leader in the specialty area, and if they can execute the strategic plan in place, they are poised to reach critical mass and arguably could be the largest specialty pharmaceutical distribution company by the end of 2003.

Ursaner has a first quarter EPS estimate of $.17, which is almost 50% greater than the same quarter last year. Ursaner has a 12-month price target of $30, which is almost double its current $16 price.

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Example 5:

Q4 2008 GLOBAL MED TECHNOLOGIES INC Earnings Conference Call - Final
25 March 2009
Voxant FD (FAIR DISCLOSURE) WIRE

...

ROBERT FRIEDMAN, ANALYST, STANDARD & POOR'S: Can you give us any color as to the current hospital environment? You made the statement that clearly things are being pushed back, you said, 12 to 15 months. What about pricing? Are you seeing pressure on that part as well?

DR. MICK RUXIN: For the benefit of many on this call, Robert was an **all-star analyst**, and Robert is extremely sophisticated in the healthcare space. We have had a relationship for a long time. And his question, I think, is very salient here.

You have all probably read that the latest is that one out of every two hospitals in the United States are losing money, and obviously they are losing money because the revenue mix has changed dramatically. You are getting a lot more unpaid patients and a lot less paid patients. Endowments are down, and charity contributions are off. So the hospitals are feeling the pinch in this recession.

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