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THE EFFECT OF THE SPECIFICITY OF THE RISK DISCLOSURE LANGUAGE ON INVESTORS’ RISK AND CREDIBILITY JUDGMENTS

BY

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DISSEDITION
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ABSTRACT

Companies use different formats in their risk disclosures in their annual and quarterly reports, as well as in their prospectuses. Some companies specifically disclose the nature of their risks by identifying the parties or circumstances that comprise the source of risk. Conversely, other companies use more generic language to convey risk. I predict and find that investors perceive risk to be more likely to adversely affect a company when it is disclosed in a more specific way rather than in a less specific way. However, I also predict and find that when investors have some prior knowledge about the risk, this effect is mitigated. Finally, after the risk is realized, I find that investors have lower credibility judgments for managers who use less specific language in their risk disclosures than ones who use more specific language when they are aware of another level of specificity. I also find some evidence that participants infer that managers are signaling the importance or triviality of a risk factor through the choice of disclosure specificity. This study contributes to our understanding of how investors react to different disclosure formats and highlights to the preparers of accounting disclosures the importance of their choice of specificity levels, and also has important implications for regulators.
To Selin
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CHAPTER 1: INTRODUCTION

Companies use different formats in their risk disclosures reported in their 10-K or 10-Q filings, as well as in their IPO prospectuses. Some companies disclose the nature of their risks by specifically identifying the parties or circumstances that comprise the source of risk (see excerpt from Yahoo’s 2009 10-K in Appendix A). Conversely, other companies use more generic language to convey risk (see excerpt from Google’s 2009 10-K in Appendix B). Recently, the Securities and Exchange Commission (SEC) has expressed concern over this latter approach. For example, in 2010, it sent a letter to Eagles Materials, Inc., a buildings materials company, regarding the company’s risk disclosure in its 10-K for the fiscal year 2009, stating that its risk disclosure was too broad and generic. It further wrote: "It is not readily apparent why such risk would be unique to you and your business." In other words, the company’s disclosures were judged to be lacking in specificity, relying instead on less specific language (Johnson 2010). In this paper, I examine the possible implications for companies who choose to report more specific versus less specific risk disclosures. Specifically, I examine investors’ risk and credibility judgments. I define more specific disclosures as those which explicitly state the nature of risks by identifying the parties or circumstances that comprise the source of risk, and less specific disclosures as those that do not explicitly identify the source of risk.

I predict that before a risk disclosed in an SEC filing is realized, investors will perceive the disclosed risk as being more probable to be realized if it is disclosed via more specific language rather than via less specific language. When more specific language is used, investors may perceive that management is signaling that the likelihood of risk realization is higher. Moreover, specific language is more vivid in the sense that it produces distinct mental images since it explicitly identifies risk sources. Research in
psychology suggests that vividness is the most important cause of the availability heuristic (Nisbett and Ross 1980)\(^1\)

I further predict that when investors have some prior exposure to a risk related to the disclosed risk, often through mass media, the difference in probability perceptions between investors who observe more and less specific risk disclosures will be mitigated. I argue that the disclosure’s specificity can increase the vividness of the risk, making it seem more probable to investors. When the risk is already available in investors’ memory, however, more specific language will not necessarily enhance the vividness of the disclosed risk because investors already have an idea about the risk before reading the disclosure.

Finally, I predict that after the risk is realized, investors have lower credibility judgments of a company’s management when they use less specific language in their risk disclosures than when they use more specific language. Investors are likely to perceive less specific language as not communicating the risk adequately enough compared to the more specific language. Schlenker et al. (1994) posit that a person is held responsible in a situation to the extent that he or she seems to be connected to the event, especially by seeming to have had personal control over the event. Because management has personal control over the specificity of the disclosure, investors are likely to blame management for not sufficiently warning them when they receive a less specific disclosure.

I test my predictions using a 2X2 between-subjects experimental design where I manipulate the specificity of a risk disclosure (risk specificity), and whether or not the risk was already available in investors’ memories (risk availability). Participants in the “risk available” condition receive some information about the risk factor (see Appendix C) and participants in the “risk not available” condition do not see this information. Participants in the “more specific” condition receive a disclosure about the

\(^1\)Availability is a heuristic that suggests that people predict the frequency of an event based on how easily an example can be brought to mind (Tversky and Kahneman 1973).
competition risk that specifically identifies the risk sources (see Appendix D Panel A), and participants in the “less specific” condition receive a generic risk disclosure that only broadly identifies the risk sources (see Appendix D Panel B).

Participants, proxies for prospective nonprofessional investors, receive some background information about and financial statements of a company operating in the travel industry. Then they receive an excerpt from the company’s annual report about the company’s risk factors, and evaluate the riskiness of the company before and after seeing the risk disclosures. Participants then read a news item from the financial press about the company’s stock price decline due to a substantial loss in its market share (risk realization). After reading this, participants evaluate the management’s credibility. The experiment concludes with a within-subject portion in which participants see both a more and less specific disclosure side by side and are asked to make evaluations pertaining to these companies’ riskiness and their managements’ credibility.

The results support my predictions. I find that the level of specificity has a statistically significant effect on participants’ judgments of the probability of risk realization, supporting my first prediction. Specifically, participants who read the more specific risk disclosure rate the risk as being more probable than do the participants who read the less specific disclosure. Further, when the risk information is already available in investors’ memories, the difference in their probability judgments across the specificity conditions decreases, suggesting that vividness impacts investors’ judgments at least to a certain extent, which supports my second prediction. Moreover, investors have lower (higher) credibility judgments for managers who disclose the risk in a less (more) specific manner after learning that the disclosed risk was realized when they are aware of the alternate level of specificity. I also find some evidence that participants infer that management is signaling the importance or triviality of a risk factor
through management’s choice of disclosure specificity, after being shown the alternate level of specificity.

This study makes contributions to preparers of accounting information, regulators, and investors, as well as to prior literature. The results of this study should help preparers to understand that more specific and less specific disclosures have different effects on investors’ judgments in different circumstances. Namely, it suggests that preparers must trade off the positive effect of less specific disclosures (lower risk judgments), if any, at the time of disclosure, with the potential negative effect (decrease in credibility judgments) if the risk is realized.

Regulators, particularly the SEC which aims to regulate these disclosures, may be interested in this study because my findings suggest that the specificity of the disclosures can play a role in investors’ risk perceptions. While more specific disclosures might cause investors to overestimate the size of a risk factor, because such disclosures increase the perceived riskiness of companies, less specific disclosures might cause investors to underestimate a risk’s probability because those disclosures may give a false impression of low riskiness.

This study may also be helpful in investor education programs as it suggests an unintentional bias that can cause differential effects on investor judgments depending on the specificity of risk disclosure language (i.e. vividness). Extant accounting research shows that risk disclosures are informative to investors (c.f. Filzen 2011; Balakrishnan and Bartov 2008). Therefore, it is important to eliminate biases that impede investors’ understanding of such disclosures. Investor education programs may focus on raising investors’ awareness about the vividness effect caused by the specificity of the disclosure, and in doing so, they may reduce the unintentional bias suggested by this study.

My study also adds to the literature on the risk judgments of investors as well as to the literature on the styles of narrative disclosures. While prior experimental research in accounting has examined risk
disclosures (c.f. Koonce, Lipe and McAnally 2005; Koonce, McAnally and Mercer 2005) and the impact of vividness (c.f. Hales et al. 2011) as well as its components (c.f. Sedor 2002; Riley 2011) in contexts other than risk disclosures, my study is the first one to experimentally examine the effect of specificity which incorporates the impact of both vividness and signaling on investors’ risk and credibility judgments. It is also the first accounting study that examines how some prior knowledge of the disclosed risk can impact investors’ response to the disclosure. In this way, the current research represents an important contribution to the accounting literature.

The remainder of the dissertation is organized as follows. Chapter 2 reviews related literature, Chapter 3 develops the hypotheses, Chapter 4 describes the experimental design, Chapter 5 reports the results, and Chapter 6 concludes.

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2 Although specificity is not her construct, in a minor portion of her manipulations (one in six pairs of abstract and concrete narratives of the same information), Riley (2011) gives her participants more detail of the same information in the concrete condition, somewhat similar to a specificity manipulation. However, Riley (2011) does not compare the results from these two levels of detail as she considers different research questions.

3 In an archival study, Kasznik and Lev (1995) examine the impact of the specificity of earnings warnings on investors’ judgments.
CHAPTER 2: BACKGROUND AND THEORETICAL FRAMEWORK

In this chapter, I explain the concept of risk disclosures, the regulation pertaining to them and elaborate on theories which suggest that specificity of risk disclosures impact investors’ judgments.

2.1 Risk Disclosures

In this study, I examine investors’ reactions to risk disclosures in companies’ annual and quarterly filings, as well as prospectuses. Risk disclosures can be found in many places in companies’ filings. For example, Item 1A of annual and quarterly reports (10K and 10Q respectively) is completely devoted to risk factors. Many other sections in annual filings include risk disclosures as well, such as Item 3- legal proceedings, Item 7- management discussion and analysis, and Item 7A-quantitative and qualitative disclosures about market risk. Risk disclosures also are found in notes to the financial statements such as Taxes and Legal proceedings, among others.

The main regulation pertaining to risk factors that I examine in this study is Item 503 of Regulation S-K (SEC 1998) which requires a company to discuss the most significant factors that make its offering speculative or risky in the prospectus. SEC Release No 33-8591 extends this requirement to 10-K and 10-Q filings. According to Regulation S-K, risk factor discussions must be concise and organized logically. Companies should not present risks that could apply to any issuer or any offering. They should explain how a particular risk affects the issuer or the securities being offered. In various comments, the SEC has emphasized that generic risk factor discussions that do not describe how a specific risk applies to the company are not helpful to an understanding of risk (SEC 2009). However, many companies provide very generic risk factor discussions. In fact, risk disclosures have become more generic, lengthy, and repetitive as companies have attempted to fend off potential scrutiny from securities plaintiffs (Johnson...
In July 2010, SEC chairman Mary Schapiro said the commission's staff is working on making a recommendation for changing the regulator's risk-disclosure requirements (SEC 2010).

Because there are almost no explicit rules regarding risk disclosures, companies have discretion in determining the specificity of these disclosures. Less specific disclosures consist of generic information and do not give any concrete examples about the source of risk. On the other hand, more specific language explicitly identifies the risk source. For instance, Yahoo specifically discloses in its 10-K that Facebook is attracting more online time and thus increasing its share of online advertising dollars, while Google discloses general social networking sites as one of its competitors. Giving concrete examples, as in more specific risk disclosures, may help investors visualize risks. It may also signal to investors that the disclosed risk factor is an important one.

2.2. Factors Affecting Risk Perceptions Based on Specificity Levels of Risk Disclosures

Fischoff et al. (1993) posit that the way a risk is communicated is important because people can be misled by inaccuracies in their risk perceptions. I argue that the level of specificity in risk disclosures affects investors’ judgments via two effects: vividness and signaling.

Vividness

One of the most important determinants of reactions to possible future outcomes is the vividness with which those outcomes are described or represented mentally (Damasio 1994). Vividness depends on situational factors, which Nisbett and Ross (1980) illustrated by contrasting two descriptions of the same event. In the first description, one learns that “Jack sustained fatal injuries in an auto accident.” This description evoked weaker reactions in their participants than the second description that reads “Jack was killed by a semi-trailer that rolled over on his car and crushed his skull.” In another context, they also found that people were willing to pay more for airline travel insurance covering death from
terrorist acts (a highly imaginable event) than death from all possible causes, which implicitly subsumes terrorist acts in addition to a range of other causes, but does not spontaneously bring fear-provoking mental images to mind.

Previous psychology literature has failed to present clear evidence on the effect of vividness in individuals’ judgments (Smith and Shaffer 2000; Taylor and Thompson 1982). In an accounting context, Hales et al. (2011) provide experimental evidence that when investors pay attention to the information provided, vivid language influences investors’ judgments more than pallid language. Although they do not manipulate vividness per se, two other experimental accounting papers show that some components of vividness have an impact on investors’ judgments. Sedor (2002) provides evidence that provoking images, one of the components of vividness, has an impact on investor judgments. Specifically, she shows that analysts are more influenced by the information provided by the management when the information is framed as scenarios rather than lists. She posits that scenario based information affects analysts’ judgment more because it facilitates their abilities to envision management’s plans. Riley (2011) examines the impact of another component of vividness, namely concreteness, on investors’ judgments. She provides evidence that investors are influenced by the valence of the information when the information is written in a concrete way more than when it is written in an abstract way. Specifically, she finds that when a disclosure is concrete and the valence is positive, it leads to a more positive investment decision than when the disclosure is concrete but the valence is negative. However, when the disclosure is abstract, the valence of the disclosure does not have any significant effects on the investment decisions. Overall, previous experimental research in accounting suggests that the vividness of information influences investors’ judgments.
Signaling

The literature on signaling represents another stream of research that suggests that more specific language increases investors’ risk perceptions. Prior research suggests that variations in the placement or description of information may provide signals to decision makers about the meaning or significance of this information (Spence 1973). Indeed, in an archival study, Nelson and Pritchard (2007) find that firms subject to greater litigation risk update the disclosures more from year-to-year and use more cautionary language. In their study, cautionary language refers to the language which contains statements that identify important factors that could cause actual results to differ materially from those in a forward looking statement, and is therefore related to the more specific language idea in my study.

In another archival study, Kasznik and Lev (1995) examine management disclosures in the face of an earnings surprise and investors’ reactions to them. They find that the bigger the earnings disappointment, the more concrete the warnings are. They also find that firms only tend to warn for permanent earnings disappointments. Finally, they find that the combined reaction to the warning and the subsequent earnings announcement is significantly more negative for firms that warned investors than the reaction to the earnings announcement of the firms that gave no warnings. The authors suggest that one possible explanation for this finding is that investors do get the signal that the earnings disappointment is permanent for the warning firms. Thus, managers appear to provide signals to investors via the language they choose to use in their disclosures and investors appear to understand these signals.
CHAPTER 3: HYPOTHESIS DEVELOPMENT

In this chapter, I use vividness, signaling, and attribution of responsibility literatures to predict that 1) investors perceive risk factors disclosed in a more specific way to be more likely to be realized, however 2) prior knowledge of the risk factor mitigates this effect, and 3) after the risk is realized, investors will find less specific managers less credible than more specific managers.

3.1. Effect of Vividness and Signaling on Investors’ Risk Perceptions

Prior accounting literature suggests that vivid information has a stronger effect on investors’ judgments than pallid information. I argue that a more specific risk disclosure is more vivid than a less specific risk disclosure. Although information disclosed via less specific language subsumes information disclosed via more specific language (just like death from all possible causes subsumes terrorist attacks), specific language makes it easier for individuals to imagine what might happen if certain conditions exist. The information Yahoo disclosed via more specific language (regarding potential online advertisement revenue losses arising from competition with Facebook) is captured in Google’s disclosure via less specific language (regarding potential revenue losses arising from competition with social networking sites). However, the way information is revealed is much more vivid in Yahoo’s more specific disclosure (citing Facebook as an example of the competitors) than it is in Google’s less specific risk disclosure (citing general social networking sites as competitors).

Prior research (Nisbett and Ross 1980) suggests that vividness is the most important source of the availability heuristic, in which people predict the frequency of an event, or a proportion within a population, based on how easily an example can be brought to mind (Tversky and Kahneman 1973). In my setting, I contend that the vividness of a more specific disclosure triggers the availability heuristic, which in turn increases the perceived probability of a risk’s realization. Nisbett and Ross (1980) define
vividness as (a) emotionally interesting, (b) concrete and imagery provoking, and (c) proximate in a sensory, temporal, or spatial way. Since more specific risk disclosures often give real-world examples whereas less specific disclosures do not, I argue that more specific disclosures are more interesting, concrete, and imagery provoking, and thus are more vivid than less specific disclosures.

Kasznik and Lev (1995) suggest that managers use more concrete language in their warnings when the risk is more serious, and argue that investors possibly understand this signal. Based on this prior research, I contend that investors may believe that a manager using more specific language is signaling that the disclosed risk is an important one for the company. Anecdotal evidence also suggests that managers might signal the importance of a risk through the use of more specific language in risk disclosures. For example, Yahoo, who specifically disclosed Facebook as one of its competitors in its SEC filings, stopped competing directly with Facebook shortly after that disclosure. Having failed at developing services that successfully compete with Facebook, it has finally installed tools such as Facebook’s “Like” and “Share” buttons on its news websites with the hope of drawing some traffic from Facebook back to Yahoo after readers click on the sharing buttons. Google, on the other hand, who did not specifically cite Facebook as its competitor on its risk disclosure, is still planning to compete directly with Facebook (Efrati 2011) evidenced by the recent launch of its social networking site, Google+.

In summary, I expect that investors perceive a risk as being more probable to be realized when it is disclosed using more specific language rather than less specific language because more specific language is more vivid than the less specific language, and investors might perceive the higher specificity of the language as a signal from management that the disclosed risk is an important one. I formally state my first hypothesis as follows:

H1: Investors will perceive a risk as being more probable to be realized if it was disclosed via more specific language rather than via less specific language.
3.2. Effect of Prior Risk Knowledge on Investors’ Perception of the Risk

Both anecdotal evidence and previous archival accounting research (c.f. Kasznik and Lev, 1995; Larcker and Zakolyukina, 2010; Rolfe and Troobe 2001) suggest that companies prefer to make less specific disclosures over more specific disclosures because, as predicted by H1, they are concerned that more specific disclosures increase the perceived risk. However, this may not be always the case. When a related risk is already available in investors’ memories, often through mass media, more specific language and less specific language are likely to have a trivial impact, if any, on vividness. Prior research indicates that a risk becomes more salient if people personally experience it, or they know someone who has experienced it. For example, although flood insurance is notoriously difficult to sell, knowing someone who has experienced a flood or earthquake, or having experienced one oneself, greatly increases the likelihood of purchasing flood insurance (Lowenstein et al. 2001). To give an example in a financial context, given the current housing crisis experienced in the US economy, investors are already aware of the price risks associated with residential real estate to some extent. Therefore, even if companies disclosed this risk using different specificity levels, the impact of vividness would not likely be different across the disclosures that used differential levels of specificity.

Accordingly, when risk information is already available in investors’ memories, the vividness of the associated risk may not increase with the specificity of the disclosure. Therefore, I expect a less substantial difference, if any, in vividness of the disclosed risk as a result of the specificity of the disclosure language when the risk factor is already available in investors’ memories through macroeconomic or other events. However, because investors may believe that management is using more specific language to signal that the disclosed risk is an important one for the company, more specific language could still trigger a significant increase in risk perceptions compared to less specific
language, although to a lesser extent than when the risk factor is not already available in investors’ memories. Thus, I formally state my second hypothesis as follows:

**H2:** The difference between investors’ risk perceptions of companies using less specific versus more specific language will be less when the risk associated with the disclosure is already available in investors’ memories than when it is not already available.

### 3.3. Implications of Less Specific vs. More Specific Disclosure after a Risk is Realized

Managers often worry that providing more specific disclosures about their risks do not benefit their companies (Eccles et al. 2001), and, therefore, try to avoid it (Rolfe and Troob 2001) because they believe that more specific disclosures increase investors’ perception of risk realization likelihood, as predicted by H1. However, the previous hypotheses do not take into account investors’ perception of the company when the disclosed risk is realized at some point in the future. The implications upon realization of the disclosed risk are important to examine because the disclosed risks may be eventually realized, and the aim of risk disclosures is to attract investors’ attention to this possibility.

Schlenker et al. (1994) posit that a person is held responsible in a situation to the extent that he or she seems to be connected to the event, especially by seeming to have had personal control over the event. In my study, the event refers to cautioning investors about the risk that is now realized. Because management has personal control over the specificity of the disclosure, investors could hold a company’s management responsible for the language they use in its risk disclosures. In the less specific language case, investors are likely to think that the disclosure did not communicate the risk adequately enough compared to the more specific disclosure, and they are likely to blame the company management for not sufficiently warning them about the risk that is realized. Therefore, I formally state my third hypothesis as follows:

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4 In their paper about firms’ disclosure practices under Financial Interpretation No. 48, Accounting for Uncertainty in Income Taxes, Robinson and Schmidt (2011) bring a different explanation to firms’ reluctance of providing specific information, namely, proprietary costs.
H3: After the risk is realized, investors will have lower credibility judgments for the management when they use less specific language in their risk disclosures than when they use more specific language.
CHAPTER 4: RESEARCH METHOD

I employ a 2X2 between-subjects design experiment, with a within-subject portion at the end, where participants read some information about a hypothetical company and make judgments about the riskiness of the company and credibility of the management.

4.1. Participants

I recruit 315 participants from Amazon’s Mechanical Turk (AMT) which is an internet labor market where “Requesters” pay individuals to complete “Human Intelligence Tasks” (HITs). AMT is an increasingly popular source of experimental data as the AMT subject pool is large, readily accessible, and at least as representative of the U.S. population as more traditional subject pools (Paolacci et al. 2010). Furthermore, recent studies show that the data obtained by AMT is at least as reliable as those obtained by traditional methods (Buhrmester et al. 2011; Paolacci et al. 2010; Horton et al. 2010). The appropriateness of a particular group of participants depends on whether they have knowledge sufficient for the task (Libby et al 2002). In that sense, my task is a judgment and decision making task that does not require any specific expert knowledge. Since recent studies show that AMT has reliably replicated a wide range of prior JDM findings (Paolacci et al. 2010; Horton et al. 2010), my subject pool is appropriate for this task. Furthermore, neither prior financial statement analysis nor investment experience has a significant effect on any of my dependent variables (all p values greater than 0.1, two-tailed, not tabulated).

Participants, taking on the role of nonprofessional prospective investors, have on average completed 1.14 accounting and 0.79 finance classes. 49.5% of them have previous financial statement analysis experience, and 37.5% of them have previous investing experience and 43.8% of them are

5 I also have an additional quality-control measure such as only recruiting participants who have had a previous approval rate greater than or equal to 95%, enabling me to choose participants who pay appropriate amount of attention to the experimental task.
planning to invest in the near future. Overall, 60% of the participants either have prior investment experience or are planning to invest in the future. 44.2% of the participants are female, and 55.6% are male. 64% of participants have a bachelor’s degree or higher. Similar to investment and financial statement analysis experience, none of the other demographic variables (gender, education, future investment plans, and accounting and finance classes taken) have a significant effect on the dependent variables (all p values greater than 0.1, two-tailed, not tabulated).

Although professional investors may also have similar reactions to the specificity of risk disclosures as nonprofessional investors, I examine nonprofessional investors for the following reasons: First, they are an important investor group, owning nearly 34% of all shares outstanding (Bogle 2005). Second, the specificity of risk disclosures is likely to affect nonprofessional investors more than professional investors, as prior research shows that nonprofessional investors have a tendency to rely more on management’s discussion, which has risk disclosures in virtually every part of it, whereas professional investors tend to rely directly on the financial statements (Hodge and Pronk 2006). Third, prior research also suggests that nonprofessional investors read financial reports in the order presented (Bouwman 1982). Since Item 1A, devoted to risk disclosures, is located at the beginning of quarterly and annual reports, nonprofessional investors who examine these reports are more likely than not to read these disclosures. Fourth, in comparison to professional investors, nonprofessional investors generally have ill-defined valuation models (SRI International 1987), and thus are more prone to the bias examined in this study.

I examine prospective investors because they are more likely to read the risk factors than current investors. Once an investment is selected, most of the attention will focus on numerical results, as current investors probably assume that they already know about the risks of the company they have invested in. Indeed, Hodge and Pronk (2006) find that nonprofessional current investors access the
financial statements more than prospective investors, while prospective investors access the
management discussion and analysis, which by its nature includes more forward looking information like
the risk factors examined in this study, more than current investors.

4.2. Task

All participants, assuming the role of prospective nonprofessional investors, receive excerpts from
the financial statements of a hypothetical company, HiddenEscapes, Inc. After that, based on random
assignment, some participants receive a press release from Google about its acquisition of a travel
information software company at the beginning of the experiment and answer two questions related to
the press release. The press release suggests that Google will be a player in the travel industry (see
Appendix C for the press release). Other participants do not see this press release. Then all participants
receive an excerpt from the annual report about the company’s risk factors. All participants receive two
risk factors: one is about the general economic conditions and the other about the company’s
competitors. The disclosure about the general economic conditions is generic (less specific) across all
conditions. I give the generic risk disclosure about general economic conditions for two reasons: (1)
investors do not typically read more specific risk factors in isolation, but together with other risk factors
most of which are written in a generic form, and (2) a generic risk factor disclosure about general
economic conditions is found in almost all companies’ risk disclosures. The other risk factor is about the
company’s competition. Based on random assignment, some participants receive a more specific risk
disclosure while other participants see a less specific risk disclosure (See Appendix D for more and less
specific disclosures as presented in this experiment).

All participants evaluate the riskiness of the company after seeing the risk disclosures. Then they
read a news item from the financial press about the company’s stock price decline due to a substantial
loss in its market share (risk realization—see Appendix F⁶). After reading this, participants evaluate management’s credibility. The experiment concludes with a within-subject portion where participants see both a more and less specific disclosure and are asked to evaluate both of them. Particularly, at this point, I show participants the risk disclosure of a competitor whose disclosure has the opposite specificity level of the disclosure of the company they evaluated so far (main company). Then I ask them to evaluate the main company’s riskiness again, and immediately ask them to evaluate its competitor’s’ riskiness. Similarly, I ask them to evaluate the credibility of the main company’s management again, and then immediately ask them to evaluate its competitors’ management’s credibility. The within-subject portion is a stronger manipulation to test the impact of the specificity of a risk disclosure after participants are made aware of the fact that a different specificity level is possible in the risk disclosure that they just examined. In a natural setting, this may occur when investors are interested in more than one company and compare their disclosures with each other, or when the level of investor sophistication is high, so investors are aware of the alternate levels of specificity in companies’ risk disclosures, or the specificity of risk disclosures are regulated such that investors have an expectation of a higher level of specificity.

4.3. Independent Variables

I test my predictions by employing a 2X2 between-subjects design experiment, manipulating a company’s risk disclosure (less specific vs. more specific), and whether or not the risk is already available in investors’ memories (risk available vs. risk not available).

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⁶ Following Mercer (2005), the news reports that the actual EPS was $0.08 below the current analyst forecast. Mercer’s manipulation is based on Brown (2001)’s study which finds that approximately 75 percent of profit firms and 43 percent of loss firms report earnings that are less than $0.05 from the consensus analyst forecast. Thus, the amount of unexpected earnings in her study ($0.08) is larger than average, which is well-suited to my context in which I want to convey significantly negative news with the risk realization.
Participants in the more specific condition receive a disclosure about the competition risk which specifically identifies the risk sources and circumstances. In the more specific disclosure, I identify both the parties and circumstances that comprise the source of the risk. In other words, I specifically identify the risk sources (e.g. FarEscapes, Inc. and ExclusiveEscapes, Inc. as competitors) and explain how these sources threaten the company (e.g. ExclusiveEscapes, Inc. has bought an online advertising company for marketing aggressively). In the less specific case, parties that comprise the source of competition risk and how these sources could threaten the company are broadly identified (e.g. online specialist travel agencies are competitors, and they can threaten the company by having greater brand recognition). The specificity levels in my study are based on real-world examples of more and less specific disclosures and the vividness literature. See Appendix E for detailed explanations of the differences across specificity conditions.

Participants in the risk available condition receive some information about the competition risk of the industry before reading the company’s risk disclosure. Investors often get this information from mass-media and such information often gives an overall view of the industry rather than the details of a company. In that respect, participants in the risk available condition get an overall view of the competition risk in the industry, by reading a press release, suggesting that Google will be a player in the industry (see Appendix C). Participants in the risk not available condition do not receive any information about the competition risk prior to reading the risk disclosure.

4.4. Dependent Variables

To test my hypotheses, I use two main dependent variables. The first one is investors’ risk realization likelihood judgments. To measure this variable, I ask my participants “What do you believe is the probability that competition will adversely affect HiddenEscapes, Inc.?”. on an 11-point scale ranging from “1-A very small probability” to “11-A very large probability”. My second dependent variable is
investors’ credibility judgments for managers. To measure this variable, I ask my participants “How credible is HiddenEscapes, Inc. Management?” on an 11-point scale ranging from “1-Not credible at all” to “11-very credible”.

4.5. Control Variable

My control variable relates to participants’ risk judgments before they receive any information about the company’s risk factors, as that judgment might influence my first dependent variable, the risk realization likelihood. To measure that variable, at the beginning of the experiment, after giving the participants some general information about HiddenEscapes, Inc. and its financial statements, but before giving them any information about the risk factors, I ask my participants, “How risky is HiddenEscapes, Inc as a potential investment?” on an 11-point scale ranging from “1-Not risky at all” to “11-Very risky.” I use this variable as a covariate in analyzing the risk realization likelihood judgments of my participants.
CHAPTER 5: RESULTS

5.1. Manipulation Checks

To measure whether I successfully manipulated specificity, after showing participants the risk disclosure of a competitor, which has the opposite levels of specificity as the disclosure of the company they have been evaluating, I give participants the definition of more and less specific disclosures. Particularly, participants read the following sentence: “Specific disclosures are disclosures which explicitly state the nature of risks by identifying the circumstances that comprise the source of risk, whereas nonspecific risk disclosures do not explicitly identify the source of the risk”. I then ask them how specific the disclosure of the company they evaluated is compared to the disclosure of its competitor. I conduct an ANOVA setting the specificity judgments as the dependent variable, specificity and availability as the independent variables. The results indicate that the specificity manipulation was successful, showing a significant effect of the level of specificity on specificity judgments (p<0.001, two-tailed, not tabulated). Estimated marginal means are 5.1 and 7.6 for less specific conditions and more specific conditions respectively (on a scale ranging from 1 (less specific) to 11 (more specific)).

I actively manipulate the availability of risk information before reading the disclosures by giving some participants determined by random assignment some information about the risk disclosed. These participants answer two questions related to the information given to them when they have access to the information, which serves two purposes: First, I want to be sure that the information will be available in their memories when they are answering questions about my dependent variables, and asking questions about the information serves the purpose of encouraging them to pay appropriate attention to the information. It also serves as a manipulation check to ensure that they understand the information given to them. All participants answered the questions correctly.
5.2. Hypothesis Tests

H1 predicts that participants will perceive a risk as being more probable to be realized if it is disclosed via more specific language rather than via less specific language. This is the case when my dependent variable, “probability that the competition will adversely affect the company,” is significantly higher when specificity is at a higher level than when it is at a lower level. To test H1, I conduct an ANCOVA, setting participants’ post-disclosure probability judgments as the dependent variable, specificity levels and availability levels as the independent variables, and participants’ pre-disclosure risk judgments as the covariate. Descriptive statistics for participants’ post-disclosure risk realization probability judgments are presented in Panel A of Table 1. The ANCOVA results reported in Panel B of Table 1 show a significant between-groups effect of disclosure specificity (p=0.005, one-tailed), supporting H1.

To verify that the effect of specificity levels on participants’ probability assessments are not driven by differences in information acquisition, participants respond to three True/False recall questions. The first question measures whether participants can correctly detect one of the competitors, the second one measures participants’ knowledge of one competitive disadvantage of the company relative to its certain competitors, and the third one measures whether participants can correctly detect how competitors may use their resources in the competition. There are no significant differences in the proportion of correct answers in any of the questions across the four conditions (p=0.839 for the first manipulation question, p=0.301 for the second manipulation question, and p=0.250 for the third manipulation question, all two-tailed, not tabulated), suggesting that the effect of specificity on probability judgments are not driven by information acquisition differences.

Participants’ pre-disclosure risk judgments have a significant influence on their risk realization probability judgments (F=62.974; p<0.001 (two-tailed)). However, results show that participants’ pre-disclosure risk judgments do not differ significantly across the four treatment conditions (all p>0.1, two-tailed, not tabulated). Therefore, I use pre-disclosure risk judgments as a covariate in the tests of H1 and H2.
Although the theory predicts that specificity levels will affect investors’ risk realization likelihood judgments, I use several different variables to measure participants’ risk judgments. The first one is the overall riskiness of the company (“How risky is HiddenEscapes, Inc. as a potential investment?”), the second one is the overall attractiveness of the company which should decrease as the perceived risk increases (“How attractive is HiddenEscapes, Inc. as a potential investment?”), the third one is the competition risk of the company (“How serious a risk do you believe HiddenEscapes, Inc. faces from competition?”), and the fourth one is the size of the competition risk (“What do you believe is the size of the possible effect of the competition on HiddenEscapes, Inc.’s earnings?”). Specificity has a significant effect with the predicted direction (it increases the risk judgments and decreases the attractiveness judgment) in all variables except for the size variable (p=0.06 for the overall riskiness, p=0.04 for the overall attractiveness, p=0.002 for the competition risk, and p=0.18 for the size of the competition risk, all one-tailed, not tabulated). These results suggest that specificity impacts participants’ risk judgments by increasing their perceptions of risk realization probability rather than the size of the risk, as predicted by the theory.

H2 predicts that when the risk associated with the disclosure is already available in investors’ memories, the difference between investors’ probability perceptions of the more and less specifically disclosed risk will decrease. The ANCOVA described above and reported in Panel B of Table 1 shows a significant interaction of specificity and availability (p=0.003, one-tailed). Panel A of Table 2 reports the results of a simple effects test within the risk available condition, and Panel B reports the results of a simple effects test within the risk not available condition. The effect of specificity on probability judgments in the risk not available condition is significant, whereas it is not significant in the risk available condition, supporting H2. Figure 1 gives a graphical description of the results pertaining to H1 and H2.
H3 predicts that after the risk is realized, investors have lower credibility judgments of management when management uses less specific language in its disclosure than when they use more specific language. This is the case when my dependent variable, credibility of the company management after risk realization, is significantly higher when specificity is at a higher level than when it is at a lower level. To test H3, I conduct an ANOVA, setting participants’ post-realization credibility judgments as the dependent variable and specificity levels and availability levels as the independent variables. However, the results do not support H3, showing no statistically significant effect of specificity on participants’ credibility judgments after risk realization (see Panel A and B of Table 3, and Figure 2A). In addition to the overall credibility of management, I asked questions related to the components of the credibility such as trustworthiness (“How trustworthy is HiddenEscapes, Inc.’s management?”), forthcomingness (“How forthcoming is HiddenEscapes, Inc.’s management?”), and competence (“How competent is HiddenEscapes, Inc.’s management?”). The results remain insignificant when I use these latter variables (all p values greater than 0.1, one-tailed, not tabulated.)

Although H3 does not hold when I examine after risk realization credibility judgment in isolation, when I use pre-risk realization credibility judgments, they become marginally significant for the overall credibility (p=0.1, one-tailed, not tabulated) and trustworthiness judgments (p=0.09, one-tailed, not tabulated). Furthermore, ANCOVA results for trustworthiness and forthcomingness reveal an interaction of specificity and availability (p=0.028 for trustworthiness, and p=0.026 for forthcomingness, two tailed, not tabulated). An examination of descriptive statistics suggests that specificity has a significant impact on trustworthiness and forthcomingness when participants did not have any information about the risk before reading the disclosure (risk not available), but does not have a significant impact on either of these variables when they had some information about the risk before reading the disclosure (risk available). Simple effects tests indeed reveal that specificity has a significant impact on both of these variables when the information is not available (p=0.008 for trustworthiness, p=0.02 for
forthcomingness, two-tailed, not tabulated), but does not have a significant effect on any of these
variables when the information is available (p=0.564 for trustworthiness, . p=0.38 for forthcomingness,
two-tailed, not tabulated). When the information is not available; estimated marginal mean for
trustworthiness is 7.3 when the disclosure is specific, and is 6.6 when the disclosure is not specific.
Similarly for the forthcomingness, estimated marginal mean is 8.3 when the disclosure is specific and 7.6
when the disclosure is not specific. Overall these ANCOVA results suggest that when pre risk realization
credibility judgments are taken into account, participants who do not have previous information about
the risk, have significantly higher trustworthiness and forthcomingness judgments for more specific
managers than for less specific managers.

Although H3 is not supported when participants examined the risk disclosure of a company in
isolation, it might be the case that after participants are made aware that disclosing the same
information with a different level of specificity is possible, and are asked to judge the credibility of
managers who disclose with different levels of specificity, H3 holds. This might occur because the
judgment of credibility depends on the evaluation of the management’s intent in choosing a specificity
level. Therefore, it is worthwhile to examine the difference between the within-subject credibility
judgments of participants for company managers who disclose risk factors more specifically versus less
specifically. After I show participants the risk disclosure of a competitor company whose disclosure has
the opposite specificity level of the disclosure they previously examined, I ask them to rate the
credibility of the management of both companies, and measure the difference between their credibility
judgments for each company’s management.

To examine whether within-subject differences in the credibility judgments of managers who
disclose more versus less specifically is significant, I conduct an ANOVA, setting the difference in
participants’ within-credibility judgments differences as the dependent variable, and the specificity and
availability levels as the independent variables. The descriptive statistics reported in Panel A of Table 4 and the ANOVA results reported in Panel B of Table 4 show that the specificity level has a significant impact on the difference in participants’ within-credibility judgments (p=0.022, one-tailed). When participants evaluate a company with a more (less) specific disclosure, and see another company’s disclosure which is less (more) specific, and evaluate the credibility of the management of both of the companies, on average, participants judge the management of the company with more (less) specific disclosure as having greater (less) credibility than the management of the company with less (more) specific disclosure (See Figure 2B).8

Overall, the results support H3 with the important caveat that participants are made aware of the alternate level of specificity in risk disclosures.

5.3. Additional Analyses-Vividness and Signaling

Following Nisbett and Ross (1980)’s definition of vividness, I measure investors’ perceptions of ease of visualization, concreteness of the disclosures9, and how interesting they find the disclosures to examine if more specific disclosures are judged to be more vivid than less specific disclosures. At the end of the experiment, participants in the more (less) specific disclosure group were shown the disclosure given to participants in the less (more) specific disclosure group, and were asked to judge (a) how easy it was to visualize the risks, (b) how interesting the disclosure was, and (c) how abstract or concrete did they feel the disclosure of the company they evaluated was compared to the disclosure of the other company. To measure the specificity level’s effects on vividness, I conduct three ANOVA tests setting

8 Participants first evaluated the credibility of the management of the company they evaluated so far (main company) and evaluated its competitor’s management’s credibility next. Therefore, for the more specific condition, the measure is “credibility of the more specific manager-credibility of the less specific manager”, whereas for the less specific condition, the measure is “credibility of the less specific manager-credibility of the more specific manager”.

9 Although concreteness is a component of vividness, it also affects the signaling judgments as will be discussed in the next paragraphs of this section.
either (a), (b), or (c) as the dependent variable, and specificity and availability as the independent variables. Overall, participants find the more specific disclosures easier to visualize, more concrete, and more interesting (all p values<0.001, two-tailed, not tabulated) than less specific disclosures.\(^{10}\)

The results of the ANOVA pertaining to H2 and follow-up simple effects test reveal that vividness plays an important role in participants’ probability assessments of risk realization. The effect of specificity on investors’ probability assessments decreases significantly when information is already available in investors’ memories, thereby reducing the impact of vividness. However, I cannot rule out the possibility that participants perceive that management is signaling the importance or the triviality of the risk factor through the specificity levels used in the risk disclosure when they see both levels of specificity, as would happen in an investment setting where investors compare different companies. In other words, it is still possible that both vividness and perceived management signaling may affect investors’ probability assessments.

In order to measure participants’ perception of signaling, at the end of the experiment, after making participants aware of both of the specificity levels, I ask them to what extent they thought the company management signaled to investors some insight regarding the company’s competition risk beyond the facts given in the risk disclosure, on an 11-point scale, ranging from 1-“management just gave the facts,” to 11-“management signaled some additional insights beyond the facts given in the disclosure.” An ANOVA setting participants’ signaling judgments as the dependent variable, and availability and specificity as independent variables reveal that specificity has a significant effect on signaling judgments (p=0.01, two tailed, not tabulated). Overall, when the risk disclosure is more specific, participants are

\(^{10}\)On a scale ranging from 1(less vivid) to 11 (more vivid), estimated marginal means for ease of visualization are 5.9 and 8.0 for less and more specific conditions respectively, estimated marginal means for concreteness are 5.4 and 7.7 for less and more specific conditions respectively, and estimated marginal means for being interesting are 5.4 and 7.4 for less and more specific conditions respectively.
more inclined to think that management intended to signal some additional insights to investors via the risk disclosure (see Figure 3).

I further ask participants what they think management conveyed in the risk disclosure, with the options (1) “management signaled that the company had below-average competition risk”, (2)”management signaled that the company had above-average competition risk”, (3) “management did not signal anything beyond the facts”, and (4) “Other (please specify).”

The majority (74%) of the participants who inferred that management signaled that the company had below-average competition risk were the ones assigned to the less specific condition, whereas the majority (55%) of the participants who inferred that management signaled that the company had above-average competition risk were the ones assigned to the more specific condition. Similarly, the majority (60%) of the participants who believed that management did not signal anything beyond the facts were in the less specific condition.

Further, a multinomial logistic regression, setting participants’ thoughts about what management conveyed in the risk disclosure as the dependent variable, and specificity and availability as the independent variables, reveals that specificity has a significant effect on participants’ judgments (p=0.02, two-tailed, not tabulated).

I also examined the factors that mediate participants’ risk judgments after they became aware of an alternate level of specificity. I ask participants to evaluate the competition risk of the company they have been evaluating after showing them a risk disclosure (a competitor’s disclosure) that has the opposite specificity level that they were randomly assigned to. When participants become aware of an alternate specificity level, the impact of vividness on risk judgments should disappear. Therefore, I expect that participants’ signaling judgments, rather than their vividness judgments, mediate the relationship between the specificity levels and their risk judgments. However, one component of

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11 Only one participant chose this option, and was excluded from the analysis described in this paragraph.
12 I ask participants “How serious a risk does HiddenEscapes, Inc. face from competition?” on an 11-point scale ranged from “1-Not serious at all” to “11-very serious”
vividness, namely participants’ concreteness judgments, is also related to the signaling judgments. The discussion about signaling in Chapter 2 and Chapter 3 suggests that concreteness can impact signaling judgments; when investors read a disclosure saying that Facebook is an important competitor (concrete), rather than saying that social networking sites are important competitors (abstract), investors may infer that management is signaling that Facebook is a serious threat to the company.

Consistent with the discussion above, I find that participants’ concreteness judgments fully mediate the relationship between their signaling judgments and specificity levels after they become aware of an alternate level of specificity, and their signaling judgments in return mediate the relationship between the specificity levels and their risk judgments. Furthermore, I find that participants’ ease of visualization judgments and the extent to which they find the disclosure interesting do not mediate the relationship between specificity levels and their risk judgments after they become aware of an alternate level of specificity.

I conduct the mediation analyses according to Baron and Kenny’s (1986) four-step procedure. Accordingly, in step 1, I regress the mediator on the independent variable, in step 2, I regress the dependent variable on the independent variable, in step 3, I regress the dependent variable on both the independent variable and on the mediator. In step 4, I confirm that the power of the independent variable is reduced when the mediator is included in the equation.

For testing the mediation between the specificity levels and participants’ signaling judgments, I first confirm that specificity levels significantly affect participants’ concreteness judgments (p<0.001, two-tailed). In step 2, I confirm that specificity levels significantly affect participants’ signaling judgments (p=0.01, two-tailed). In step 3, I confirm that concreteness judgments significantly affect participants’ signaling judgments after controlling for specificity levels (p<0.001, two-tailed). In step 4, I confirm that concreteness judgments fully mediate the relationship between the specificity levels and signaling
judgments, as the effect of specificity levels is no longer significant (p=0.466, two-tailed) when included in the model with the concreteness judgments.

For testing the mediation between the specificity levels and participants’ risk judgments, I first confirm that specificity levels significantly affect participants’ signaling judgments (p=0.01, two-tailed). In step 2, I confirm that specificity levels significantly affect participants’ risk judgments (p=0.06, two-tailed). In step 3, I confirm that participants’ signaling judgments significantly affect their risk judgments after controlling for specificity levels (p=0.003, two-tailed). In step 4, I confirm that participants’ signaling judgments fully mediate the relationship between the specificity levels and participants’ signaling judgments, as the effect of specificity levels is no longer significant (p=0.142, two-tailed) when included in the model with the signaling judgments.

I also confirm the relationship between specificity levels, participants’ concreteness, signaling, and risk judgments, as depicted in the mediation analyses above, with a path analysis. In my path analysis, I predict that after participants become aware of an alternate specificity level, the specificity level of the disclosure they are evaluating will impact their concreteness judgments, the concreteness judgments in turn will impact their signaling judgments, and signaling judgments will impact their risk judgments. The analysis suggests the model fits well, as the comparative fit index is 0.98 (Kline (1998) suggests that indices greater than 0.9 indicate a good fit). I find that all links are specific at the 0.001 level (two-tailed). Figure 4 gives a graphical description of the model along with standardized regression coefficients and p-values.

5.4. Additional Evidence

In a pilot study I ran prior to running this experiment with a different set of participants, I observed results consistent with the results of the current study. In the pilot study, I recruited 63 students from a graduate accounting class of a large state university. The pilot-participants on average had 9.7
accounting classes and 2.68 finance classes. Consistent with H1, specificity had a significant effect on pilot-participants’ risk judgments (p=0.04, one tailed, not tabulated). Consistent with H2, specificity on pilot-participants’ risk judgments became insignificant when they had some prior information about the risk (p=0.16, one-tailed, not tabulated), but remained marginally significant when they did not have any prior information about the risk (p=0.1, one-tailed, not tabulated). Consistent with the results of H3, after the risk is realized, when I showed pilot-participants the risk disclosure of a competitor which had the opposite specificity level of the company they evaluated so far, and asked them to assess the credibility of each company’s management, specificity had a significant impact in the difference between the credibility judgments of the pilot-participants for more specific and less specific managers (p=0.003, one-tailed, not tabulated). The pilot-participants on average rated more specific managers as being more credible than less specific managers. Overall, these results show that the same inferences are reached with participants who have more knowledge about accounting and finance than my participants, showing the robustness of the results.
CHAPTER 6: CONCLUSION

Companies use different formats in their risk disclosures reported in their 10-K or 10-Q filings and prospectuses. Some companies specifically disclose the nature of their risks by identifying the parties or circumstances that comprise the source of risk. Conversely, other companies use less specific language to convey risk. More specific disclosures are disclosures which explicitly state the nature of risks by identifying the parties or circumstances that comprise the source of risk, whereas less specific risk disclosures do not explicitly identify the source of risk. In this paper, I examine the possible implications for companies who choose to report their risk disclosures in a more specific versus less specific way.

Overall, my results suggest that although both anecdotal evidence and previous archival accounting research (cf. Kasznik and Lev 1995; Larcker and Zakolyukina, 2010; Rolfe and Troobe 2001) suggest that companies prefer to make less specific disclosures over more specific disclosures because they are concerned that more specific disclosures will harm them, that concern is not necessarily valid. There are circumstances where more specific disclosures seem to disadvantage a company by increasing investors’ risk perceptions, but there are also circumstances where the specificity of a disclosure does not have any significant effect on investors’ decisions. There also are circumstances in which less specific disclosures harm a company more than the more specific disclosures via their effect on management credibility judgments after risk realization.

As with any experimental research, the current study is not without limitations. The experimental materials used in this study are not a complete representation of what would normally be available when investors make a decision. Providing participants with that level of detail would require more time to complete the materials than could be realistically requested. Therefore, current study is subject to the same caveats as other experimental studies as a perfect replication of the real-world is not possible in any experimental study.
This study makes contributions to preparers of accounting information, regulators, and investors, as well as to prior literature. The results of this study may help preparers to understand that more specific and less specific disclosures have different effects on investors’ judgments in different circumstances. Regulators, particularly the SEC, which aims to regulate these disclosures and is concerned about the generic risk disclosures, may benefit from this study because they may get additional motivation to regulate risk disclosures since this study suggests that the specificity of the disclosures does play a role in investors’ risk perceptions. While more specific disclosures might cause investors to overestimate the probability of risk, less specific disclosures might cause investors to underestimate a risk’s likelihood because they give a false impression of low probability of risk realization. Since this study suggests an unintentional bias as one of the causes of the differential effects on investor judgments depending on the specificity of the risk disclosure (i.e. vividness), it may also be used in investor education programs. To my knowledge, this study is the first accounting study that examines the effect of disclosure specificity, which incorporates the impact of both vividness and signaling, and the effect of prior knowledge about the disclosure on investors’ risk judgments.

This dissertation suggests several other directions for future research. Overall, this study suggests that investors perceive that management is signaling the triviality or the importance of the risk through the specificity level of their disclosures. On the other hand, both anecdotal evidence and previous literature suggest that managers avoid specific risk disclosures. Therefore, researchers could examine whether managers signal the triviality or importance of their companies’ risks through the specificity levels of their disclosures, and what factors encourage them to signal the severity of risks through more specific disclosures. Researchers might also examine the circumstances when investors penalize or reward more specific risk disclosures. Kasznik and Lev (1995) find that investors penalize more specific risk disclosures, yet they also find that such disclosures are extremely rare. Therefore, one area researchers could examine is whether an increase in the overall specificity levels of disclosures changes
or even reverses investors’ negative attitudes against more specific risk disclosures. Moreover, the literature on the specificity levels of the disclosures so far has focused on risk disclosures, which are by their nature, disclosures about bad news. Therefore, future research might examine how the specificity level of disclosures about good news is determined by managers, and how investors react to such specificity levels. Finally, this dissertation focuses on non-professional investors. Although professional investors such as analysts may show similar reactions to the specificity levels of risk disclosures as non-professional investors, it is possible that their reactions might be different from non-professional investors for two reasons: First, they know more about the risk of the company they are examining, and therefore should be less prone to biases about vividness. However, they might be more sensitive about the possibility of management signaling through the language choice, and might be more influenced by the specificity levels through their perceptions of management signaling. Therefore, it might be interesting for researchers to examine professional investors’ reactions to specificity levels of risk disclosures.
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Yahoo, Inc. 2009. 10-K.
APPENDIX A : AN EXAMPLE OF A MORE SPECIFIC DISCLOSURE

(adopted from Yahoo’s 2009 10-K filing)

We face significant competition for users, advertisers, publishers and distributors, principally from Google, Microsoft, and AOL.

We face significant competition from Google, Microsoft, and AOL, which each offer an integrated variety of Internet products, advertising services, technologies, online services and content in a manner similar to Yahoo!. Google, Microsoft and others offer products and services that directly compete for users with our offerings, including consumer e-mail, desktop search, local search, instant messaging, photos, maps, video sharing, content channels, mobile applications, and shopping. Similarly, the advertising networks operated by Google, Microsoft, AOL and others offer services that directly compete with our offerings for advertisers, including advertising exchanges, ad serving technologies and sponsored search offerings. We further compete for users, advertisers and developers with the wide variety of other providers of online services, including social media and networking sites. Social networking sites, such as Facebook.com in particular, are attracting a substantial and increasing share of users’ online time, which could enable them to attract an increasing share of online advertising dollars.

Some of our existing competitors and possible additional entrants may have greater brand recognition for certain products and services, more expertise in a particular segment of the market, and greater operational, strategic, technological, financial, personnel, or other resources than we do. For example, Google and Microsoft have access to considerable financial and technical resources with which to compete aggressively, including by funding future growth and expansion and investing in acquisitions and research and development.
APPENDIX B: AN EXAMPLE OF A LESS SPECIFIC DISCLOSURE

(adopted from Google’s 2009 10-K filing)

We face intense competition.

Our business is rapidly evolving and intensely competitive, and is subject to changing technology, shifting user needs, and frequent introductions of new products and services. We have many competitors in different industries, including general purpose search engines, vertical search engines and e-commerce sites, social networking sites, traditional media companies, and providers of online products and services. Our current and potential competitors range from large and established companies to emerging start-ups. Established companies have longer operating histories and more established relationships with customers and end users, and they can use their experience and resources against us in a variety of competitive ways, including by making acquisitions, investing aggressively in research and development, and competing aggressively for advertisers and websites. Emerging start-ups may be able to innovate and provide products and services faster than we can. If our competitors are more successful than we are in developing compelling products or in attracting and retaining users, advertisers, and content providers, our revenues and growth rates could decline.
APPENDIX C: INFORMATION GIVEN IN RISK AVAILABLE CONDITION

Below is a press release from Google:

Google and ITA Software Sign Acquisition Agreement

Cambridge and Mountain View, Calif. (July 1 2010) - ITA Software, Inc., a travel information software company, and Google Inc. (NASDAQ: GOOG) today announced that they have signed a definitive agreement for Google to acquire ITA.

"We wanted to take advantage of the low barriers to entry in the tourism industry. ITA's very talented team has created an impressive product to organize travel information," said Eric Schmidt, Chairman and CEO of Google. "Their technology opens exciting possibilities for us to create new ways for users to more easily find travel information online, and we're looking forward to welcoming them to Google."

The deal will allow Google to pursue the creation of new travel search tools that will enable people to book flights and make other travel arrangements and to find better travel accommodations on the Internet. Both companies have approved the transaction, which is subject to customary closing conditions.
APPENDIX D: SPECIFICITY MANIPULATION

Panel A- More Specific Risk Disclosure

Below is an excerpt from the Risk Factors Section of HiddenEscapes, Inc.’s most recent annual report.

*Weak economic conditions may harm our business*

The disruptions in the national and global economies and financial markets, and the related reductions in the availability of credit, have resulted in high unemployment rates and declines in consumer confidence and spending, and have made it more difficult for businesses to obtain financing. Our performance depends significantly on economic conditions. If the weak economic conditions persist, it could have a number of adverse effects on our business, including weaker customer demand and potential insolvency of key suppliers, both of which could negatively impact our liquidity and ultimately decrease our profitability.

*We face intensive competition*

We face intensive competition in every aspect of our business. We currently compete with other online travel agencies, such as FarEscapes, Inc. and ExclusiveEscapes, Inc., internet search engines offering travel itineraries and recommendations, and traditional travel agencies who can reach elderly customers more easily. Some of these competitors have more financial resources than us, and can use these resources in a variety of ways to compete with us. For example, one of our competitors has started to advertise on television. It is likely that competition risk will adversely affect us in the future. If that occurs, competition will have a considerably negative impact on our revenues.
Panel B Less Specific Risk Disclosure

Below is an excerpt from the Risk Factors Section of HiddenEscapes, Inc.'s most recent annual report.

**Weak economic conditions may harm our business**

The disruptions in the national and global economies and financial markets, and the related reductions in the availability of credit, have resulted in high unemployment rates and declines in consumer confidence and spending, and have made it more difficult for businesses to obtain financing. Our performance depends significantly on economic conditions. If the weak economic conditions persist, it could have a number of adverse effects on our business, including weaker customer demand and potential insolvency of key suppliers, both of which could negatively impact our liquidity and ultimately decrease our profitability.

**We face intensive competition**

We face intensive competition in every aspect our business. We currently compete with other online travel agencies, other travel information providers on the web, and traditional travel agencies who can reach certain customers more easily. Some of these competitors have more financial resources than us, and can or are using these resources in a variety of ways to compete with us including improving their brand recognition. It is likely that competition risk will adversely affect us in the future. If that occurs, competition will have a considerably negative impact on our revenues.
### APPENDIX E: DIFFERENCES BETWEEN MORE AND LESS SPECIFIC DISCLOSURES

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<th>More Specific</th>
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<td>We face intensive competition in every aspect our business.</td>
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<td>We currently compete with other (1) online travel agencies, such as FarEscapes,</td>
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<td>information providers on the web, and traditional travel agencies who</td>
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<td>more financial resources than us, and (4) can or are using these resources in</td>
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</tr>
<tr>
<td>a variety of ways to compete with us including improving their brand</td>
<td>more financial resources than us, and (4) can use these resources in a variety</td>
</tr>
<tr>
<td>recognition.</td>
<td>of ways to compete with us. For example, one of our competitors has started</td>
</tr>
<tr>
<td></td>
<td>to advertise on the television.</td>
</tr>
<tr>
<td>It is likely that competition risk will adversely affect us in the future.</td>
<td>It is likely that competition risk will adversely affect us in the future.</td>
</tr>
<tr>
<td>If that occurs, competition would have a considerably negative impact on our</td>
<td>If that occurs, competition would have a considerably negative impact on our</td>
</tr>
<tr>
<td>revenues.</td>
<td>revenues.</td>
</tr>
</tbody>
</table>

Following real-world examples of more and less specific disclosures and vividness literature, In (1), for the more specific condition, I give two specific names of competitors, whereas I do not give any specific names for the less specific condition (see Frey and Eagly 1993). In (2), for the less specific case, I identify other travel information providers on the web as one of my competitors, which by definition includes internet search engines offering travel itineraries and recommendations, but does not explicitly mention them (see Smith and Schaffer 2000), whereas for the more specific case, I explicitly mention a type of the business within that group. In (3), I explicitly state the type of customers that the traditional travel agencies can reach more easily for the more specific group, but do not explicitly describe them for the less specific group (see Frey and Eagly 1993). In (4), I give a specific example of how one competitor has been competing for the more specific case (See Frey and Eagly 1993), whereas for the more specific case I give a broad example.
APPENDIX F: RISK REALIZATION

Below is news about HiddenEscapes, Inc. that appeared in the financial press (online) 6 months after its 2010 annual report was published.

Today, the price of HiddenEscapes, Inc. dropped by 5% after the company announced that its market share decreased from 8% to 5% in a year, due to the intense competition in the industry. Company management expects the drop in its market share to negatively affect the company’s revenues and profits, and forecasts earnings per share to be $0.44 for the next quarter, $0.08 below the current consensus analyst forecast of $0.52.
This figure represents the descriptive statistics for the measure used in my experiment to capture participants' risk likelihood judgments in order to test my first two hypotheses. The experiment manipulates (1) whether a risk disclosure is more or less specific (specificity) and (2) participants had some information about the risk disclosed (risk availability). After reading some information about HiddenEscapes, Inc., participants provided pre-manipulation risk judgments (pre-risk Jdgmt-covariate) of the company by responding to the following: “How risky is HiddenEscapes, Inc. as a potential investment?” using an 11-point scale anchored on 1 (“not risky at all”) and 11 (“very risky”). Participants then observed one of two specificity levels in a risk disclosure. The more specific disclosure identified the specific risk sources and explained specifically how these sources threaten the company, whereas in the less specific disclosure, parties that comprised the source of the risk and how these sources could threaten the company were broadly identified. Participants in the risk-already-available-condition read some news about the risk disclosed by the company before reading the risk disclosures. Participants in the risk-not-already-available condition did not read any news. After reading the risk disclosure, participants provided post-disclosure probability judgments (dependent variable) by responding to the following: “What do you believe is the probability that competition will adversely affect HiddenEscapes, Inc.?“ using an 11-point scale anchored on 1 (“a very small probability”) and 11 (“a very large probability”).
This figure represents the descriptive statistics for the measure used in my experiment to capture participants’ credibility judgments in order to test H3. The experiment manipulates (1) whether a risk disclosure is more or less specific (specificity) and (2) participants had some information about the risk disclosed (risk availability). All participants received a risk disclosure of HiddenEscapes, Inc. The more specific disclosure identified the specific risk sources and explained specifically how these sources threaten the company, whereas in the less specific disclosure, parties that comprised the source of the risk and how these sources could threaten the company were broadly identified. Participants in the risk-already-available condition read some news about the risk disclosed by the company before reading the risk disclosures. Participants in the risk-not-already-available condition did not read any news. After reading the disclosures, participants read some news in the financial press which described a drop in the company’s stock prices after its market share dropped from 8% to 5% and responded to the following: “How credible is HiddenEscapes, Inc.’s management?” (dependent variable), using an 11-point scale anchored on 1 (“not credible at all”) and 11 (“very credible”).
This figure represents the descriptive statistics for the measure used in my experiment to capture the difference in participants’ within-subject credibility judgments. The experiment manipulates (1) whether a risk disclosure is more or less specific (specificity) and (2) participants had some information about the risk disclosed (risk availability). The more specific disclosure identified the specific risk sources and explained specifically how these sources threaten the company (HiddenEscapes, Inc.), whereas in the less specific disclosure, parties that comprised the source of the risk and how these sources could threaten the company were broadly identified. Participants in the risk-already-available-condition read some news about the risk disclosed by the company before reading the risk disclosures. Participants in the risk-not-already-available condition did not read any news. Participants read some news in the financial press which described a drop in the HiddenEscapes, Inc.’s stock prices after its market share dropped from 8% to 5%, and they viewed the risk disclosure of one competitor of HiddenEscapes, Inc. that had the opposite specificity level as HiddenEscapes, Inc. Then they responded to the following question both for HiddenEscapes, Inc and its competitor: “How credible is HiddenEscapes, Inc.’s (competitor’s) management?”, using an 11-point scale anchored on 1 (“not credible at all”) and 11 (“very credible”). The dependent variable captures the difference in participants’ credibility judgments for HiddenEscapes, Inc and its competitors’ management.
This figure represents the descriptive statistics of the supplemental analysis captured at the end of the experiment to test whether participants perceive that management is signaling the seriousness of the risk through the specificity levels. The experiment manipulates (1) whether a risk disclosure is more or less specific (specificity) and (2) participants had some information about the risk disclosed (risk availability). All participants received a risk disclosure of HiddenEscapes, Inc. The more specific disclosure identified the specific risk sources and explained specifically how these sources threaten the company, whereas in the less specific disclosure, parties that comprised the source of the risk and how these sources could threaten the company were broadly identified. Participants in the risk-already-available-condition read some news about the risk disclosed by the company before reading the risk disclosures. Participants in the risk-not-already-available condition did not read any news. After all the dependent variables to test the hypotheses were captured, participants were made aware of both of the specificity levels, and were asked to what extent they thought the company management signaled to investors some insight regarding the company’s competition risk beyond the facts given in the risk disclosure (dependent variable), on an 11-scale, ranging from 1-“management just gave the facts,” to 11-“management signaled some additional insights beyond the facts given in the disclosure”.

FIGURE 3: RESULTS-SIGNALING
FIGURE 4: PATH ANALYSIS-RELATION BETWEEN SPECIFICITY LEVELS, SIGNALING JUDGMENTS, AND RISKINESS JUDGMENTS

This figure represents the path analysis between specificity levels, concreteness judgments, signaling judgments, and riskiness judgments. The experiment manipulates whether a risk disclosure is more or less specific (specificity). The more specific disclosure identifies the specific risk sources and explains specifically how these sources threaten the company (HiddenEscapes, Inc.), whereas in the less specific disclosure, parties that comprise the source of the risk and how these sources could threaten the company are broadly identified. Participants read some news in the financial press which described a drop in the HiddenEscapes, Inc.’s stock prices after its market share dropped from 8% to 5%, and they viewed the risk disclosure of one competitor of HiddenEscapes, Inc (SmallHotels, Inc.) that had the opposite specificity level as HiddenEscapes, Inc. The participants then responded to the following questions for HiddenEscapes, Inc : (1)”How serious a risk does HiddenEscapes, Inc. face from competition?” (riskiness judgment), using an 11-point scale anchored on 1 (“not serious at all”) and 11 (“very serious”). (2) “Some risk disclosures just give the facts, but others try to signal to investors some additional insight about companies’ future prospects. To what extent do you think HiddenEscapes,Inc.’s management signaled to investors some additional insight about the company’s competition risk beyond the facts given in the risk disclosure?” (signaling judgment), using an 11-point scale anchored on 1 (“management just gave the facts”) and 11 (“Management signaled some additional insight beyond the facts given in the disclosure”), and (3)”How abstract or concrete did you feel that HiddenEscapes, Inc.’s risk disclosure about competition was compared to SmallHotels, Inc.’s competition risk disclosure?” (concreteness judgments), using an 11-point scale anchored on 1 (“HiddenEscapes, Inc.’s competition risk disclosure was much more abstract than SmallHotels, Inc.’s risk disclosure”) and 11 (“HiddenEscapes, Inc.’s disclosure was much more concrete than SmallHotels, Inc’s risk disclosure”). The figure above shows the standardized regression coefficients and the p-values for each link. All p-values are two-tailed.
TABLES

TABLE 1: TESTS FOR HYPOTHESIS 1 AND 2

H1: Investors will perceive a risk as being more probable to be realized if it was disclosed via more specific language rather than via less specific language

H2: The difference between investors’ risk perceptions of companies using less specific versus more specific language will be less when the risk associated with the disclosure is already available in investors’ memories than when it is not already available

Panel A - Descriptive Statistics - Dependent Variable: Post-Disclosure Probability Judgments Adjusted Least Squares Mean [Standard Error]

<table>
<thead>
<tr>
<th>Specificity Condition</th>
<th>Availability Condition</th>
<th>Less Specific</th>
<th>More Specific</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>8.25 [1.776]</td>
<td>8.89 [1.619]</td>
<td></td>
</tr>
</tbody>
</table>

Panel B ANCOVA Model of Post-Disclosure Probability Judgments (H1)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity Level</td>
<td>15.849</td>
<td>1</td>
<td>15.849</td>
<td>6.704</td>
<td>0.005</td>
</tr>
<tr>
<td>Availability Level</td>
<td>0.013</td>
<td>1</td>
<td>0.013</td>
<td>0.005</td>
<td>0.471</td>
</tr>
<tr>
<td>Pre-risk Jdgmnt.</td>
<td>148.447</td>
<td>1</td>
<td>148.447</td>
<td>62.794</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SpecificityXAvailability</td>
<td>17.914</td>
<td>1</td>
<td>17.914</td>
<td>7.578</td>
<td>0.003</td>
</tr>
<tr>
<td>Error</td>
<td>732.855</td>
<td>310</td>
<td>2.364</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This table presents descriptive statistics and ANCOVA for the measure used in my experiment to capture participants’ risk likelihood judgments. The experiment manipulates (1) whether a risk disclosure is more or less specific (specificity) and (2) participants had some information about the risk disclosed (risk availability). After reading some information about HiddenEscapes, Inc., participants provided pre-manipulation risk judgments (pre-risk Jdgmnt-covariate) of the company by responding to the following: “How risky is HiddenEscapes, Inc. as a potential investment?” using an 11-point scale anchored on 1 (“not risky at all”) and 11 (“very risky”). Participants then observed one of two specificity levels in a risk disclosure. The more specific disclosure identified the specific risk sources and explained specifically how these sources threaten the company, whereas in the less specific disclosure, parties that comprised the source of the risk and how these sources could threaten the company were broadly identified. Participants in the risk-already-available-condition read some news about the risk disclosed by the company before reading the risk disclosures. Participants in the risk-not-already-available condition did not read any news. After reading the risk disclosure, participants provided post-disclosure probability judgments (dependent variable) by responding to the following: “What do you believe is the probability that competition will adversely affect HiddenEscapes, Inc.?” using an 11-point scale anchored on 1 (“a very small probability”) and 11 (“a very large probability”). All p-values are one-tailed.
TABLE 2: FOLLOW UP SIMPLE EFFECTS TESTS FOR HYPOTHESIS 2

H2: The difference between investors’ risk perceptions of companies using less specific versus more specific language will be less when the risk associated with the disclosure is already available in investors’ memories than when it is not already available

Panel A - ANCOVA Model of Post-Disclosure Probability Judgments | Risk Available Condition

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity Level</td>
<td>0.000</td>
<td>1</td>
<td>0.000</td>
<td>0.000</td>
<td>0.497</td>
</tr>
<tr>
<td>Pre-risk Jdgmt.</td>
<td>46.307</td>
<td>1</td>
<td>46.307</td>
<td>18.121</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Error</td>
<td>367.983</td>
<td>144</td>
<td>2.555</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel B - ANCOVA Model of Post-Disclosure Probability Judgments-Risk Not Available Condition

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity Level</td>
<td>33.462</td>
<td>1</td>
<td>33.462</td>
<td>15.318</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pre-risk Jdgmt.</td>
<td>106.575</td>
<td>1</td>
<td>106.575</td>
<td>48.788</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Error</td>
<td>360.437</td>
<td>165</td>
<td>2.184</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panels A and B of Table 2 present simple main effect tests for the measure used in my experiment to capture participants’ risk likelihood judgments. The experiment manipulates (1) whether a risk disclosure is more or less specific (specificity) and (2) participants had some information about the risk disclosed (risk availability). After reading some information about HiddenEscapes, Inc., participants provided pre-manipulation risk judgments (pre-risk Jdgmt.-covariate) of the company by responding to the following: “How risky is HiddenEscapes, Inc. as a potential investment?” using an 11-point scale anchored on 1 (“not risky at all”) and 11 (“very risky”). Participants then observed one of two specificity levels in a risk disclosure. The more specific disclosure identified the specific risk sources and explained specifically how these sources threaten the company, whereas in the less specific disclosure, parties that comprised the source of the risk and how these sources could threaten the company were broadly identified. Participants in the risk-already- available-condition read some news about the risk disclosed by the company before reading the risk disclosures. Participants in the risk-not- already-available condition did not read any news. After reading the risk disclosure, participants provided post-disclosure probability judgments (dependent variable) by responding to the following: “What do you believe is the probability that competition will adversely affect HiddenEscapes, Inc.?” using an 11-point scale anchored on 1 (“a very small probability”) and 11 (“a very large probability”). All p-values are one-tailed.
H3: After the risk is realized, investors will have lower credibility judgments for the management when they use less specific language in their risk disclosures than when they use more specific language.

Panel A Descriptive Statistics- Dependent Variable: Credibility Judgments after Risk Realization

<table>
<thead>
<tr>
<th>Specificity Condition</th>
<th>Availability Condition</th>
<th>Less Specific</th>
<th>More Specific</th>
<th>Average</th>
</tr>
</thead>
</table>

Panel B-ANOVA- Credibility Judgments

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity Level</td>
<td>1.290</td>
<td>1</td>
<td>1.290</td>
<td>0.241</td>
<td>0.312</td>
</tr>
<tr>
<td>Availability Level</td>
<td>1.803</td>
<td>1</td>
<td>0.037</td>
<td>0.337</td>
<td>0.281</td>
</tr>
<tr>
<td>SpecXAvail</td>
<td>1.443</td>
<td>1</td>
<td>1.443</td>
<td>0.270</td>
<td>0.302</td>
</tr>
<tr>
<td>Error</td>
<td>1662.054</td>
<td>311</td>
<td>5.344</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This table presents descriptive statistics and ANOVA for the measure used in my experiment to capture participants’ credibility judgments. The experiment manipulates (1) whether a risk disclosure is more or less specific (specificity) and (2) participants had some information about the risk disclosed (risk availability). All participants received a risk disclosure of HiddenEscapes, Inc. The more specific disclosure identified the specific risk sources and explained specifically how these sources threaten the company, whereas in the less specific disclosure, parties that comprised the source of the risk and how these sources could threaten the company were broadly identified. Participants in the risk-already-available-condition read some news about the risk disclosed by the company before reading the risk disclosures. Participants in the risk-not-already-available condition did not read any news. After reading the disclosures, participants read some news in the financial press which described a drop in the company’s stock prices after its market share dropped from 8% to 5% and responded to the following: “How credible is HiddenEscapes, Inc.’s management?” (dependent variable), using an 11-point scale anchored on 1 (“not credible at all”) and 11 (“very credible”). All p-values are one-tailed.
TABLE 4: TESTS FOR H3 CONTINUED

H3: After the risk is realized, investors will have lower credibility judgments for the management when they use less specific language in their risk disclosures than when they use more specific language.

Panel A Descriptive Statistics- Dependent Variable: Difference in Credibility Judgments after Risk Realization Between More and Less Specific Disclosures
Means [Standard Errors]

<table>
<thead>
<tr>
<th>Availability Condition</th>
<th>Less Specific-More Specific</th>
<th>More Specific-Less Specific</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Available</td>
<td>-0.03 [1.07] N=69</td>
<td>0.13 [1.10] N=78</td>
<td>0.05 [1.08] N=147</td>
</tr>
<tr>
<td>Risk Not Available</td>
<td>-0.34 [1.63] N=85</td>
<td>0.11 [1.35] N=83</td>
<td>-0.12 [1.51] N=168</td>
</tr>
<tr>
<td>Average</td>
<td>-0.20 [1.41] N=154</td>
<td>0.12 [1.23] N=161</td>
<td></td>
</tr>
</tbody>
</table>

Panel B ANOVA: Within-Subject Difference in Credibility Judgments after Risk Realization Between More and Less Specific Disclosures

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity Level</td>
<td>7.202</td>
<td>1</td>
<td>7.202</td>
<td>4.104</td>
<td>0.022</td>
</tr>
<tr>
<td>Availability Level</td>
<td>2.155</td>
<td>1</td>
<td>2.155</td>
<td>1.228</td>
<td>0.1345</td>
</tr>
<tr>
<td>SpecXAvail</td>
<td>1.673</td>
<td>1</td>
<td>1.673</td>
<td>.953</td>
<td>0.165</td>
</tr>
<tr>
<td>Error</td>
<td>547.790</td>
<td>311</td>
<td>1.755</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This table presents descriptive statistics and ANOVA for the measure used in my experiment to capture the difference in participants’ within-subject credibility judgments. The experiment manipulates (1) whether a risk disclosure is more or less specific (specificity) and (2) participants had some information about the risk disclosed (risk availability). The more specific disclosure identified the specific risk sources and explained specifically how these sources threaten the company (HiddenEscapes, Inc.), whereas in the less specific disclosure, parties that comprised the source of the risk and how these sources could threaten the company were broadly identified. Participants in the risk-already-available-condition read some news about the risk disclosed by the company before reading the risk disclosures. Participants in the risk-not-already-available condition did not read any news. Participants read some news in the financial press which described a drop in the HiddenEscapes, Inc.’s stock prices after its market share dropped from 8% to 5%, and they viewed the risk disclosure of one competitor of HiddenEscapes, Inc. that had the opposite specificity level as HiddenEscapes, Inc. Then they responded to the following question both for HiddenEscapes, Inc and its competitor: “How credible is HiddenEscapes, Inc.’s (competitor’s) management?”, using an 11-point scale anchored on 1 (“not credible at all”) and 11 (“very credible”) The dependent variable captures the difference in participants’ credibility judgments for HiddenEscapes, Inc and its competitors’ management. All p-values are one-tailed.