Building a Safe Harbor for Whom? A Look at Cautionary Disclaimers and Investors’ Reactions to Forward-Looking Statements

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Abstract

We examine how cautionary disclaimers affect investors’ reactions to the type of forward-looking statements often provided by management in their voluntary disclosures. Using two experiments, we first show that unsophisticated investors are not spontaneously skeptical of forward-looking statements and that, while a cautionary disclaimer lowers explicit perceptions of reliability, investors’ valuation judgments are not particularly sensitive to the disclaimer. In Experiment 2, we explore additional ways to increase the impact of cautionary disclaimers, and we find that cautionary disclaimers that discuss specific risks at the end of a disclosure lead to the greatest reduction in investors’ explicit perceptions of reliability. This finding suggests that cautionary disclaimers might more effectively induce caution when they discuss specific risks at the end of a disclosure. However, as in Experiment 1, we again find limited evidence in Experiment 2 that cautionary disclaimers affect investors’ valuation judgments. While we view this latter finding with a degree of caution, it does call into question the merit of granting (denying) safe harbor to management on the basis of having provided (omitted) cautionary disclaimers that do little to influence investors’ valuation judgments.

Keywords: voluntary disclosure, forward-looking statements, cautionary language, safe harbor, investor judgments
I. INTRODUCTION

The Private Securities Litigation Reform Act of 1995 ("the Reform Act") provides a "safe harbor" for forward-looking statements with the intent of minimizing legal liability in the event that investors rely on forward-looking statements that, \textit{ex post}, turn out to be inaccurate (Perino 2003).\footnote{Private Securities Litigation Reform Act, Pub. L. No. 104-67, 109 Stat. 737 (1995) (codified in scattered sections of 15 U.S.C.).} In order to qualify for the safe harbor, firms are required to identify forward-looking statements and accompany those statements with "meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those in the forward-looking statement" (15 U.S.C. §§ 77z-2(c)(1)(A)(i)). Yet the SEC and courts have expressed concern that firms sometimes provide cautionary statements that are not sufficiently "meaningful." Thus, regulators and courts appear to believe that investors are insufficiently skeptical of forward-looking statements in the absence of disclaimers, and that at least some managers are hesitant to provide meaningful disclaimers. To address whether regulators’ faith in (and managers’ aversion to) disclaimers is warranted, we design two experiments that examine how investors respond to forward-looking statements and to disclaimers. We focus on unsophisticated investors because these investors are presumably most at risk to over-rely on firms’ optimistic forward-looking statements.

We begin by first examining whether unsophisticated investors are skeptical of forward-looking statements (vis-à-vis historical statements). Financial reporting standards, internal control systems, and external audits all help ensure the integrity and fidelity of reported past performance, but not forward-looking statements. Thus, knowledgeable investors might judge forward-looking statements to be of lower reliability and so view them with a degree of
skepticism. However, research in psychology suggests that the default mode of information processing is to accept information initially, and that disbelief requires active rejection (Gilbert 1991). If so, it may be difficult for investors to actively disbelieve (or judge more cautiously) what they read. Importantly, the very existence of safe harbor rules requiring firms to provide disclaimers of forward-looking statements suggests a presumption among regulators that a non-trivial class of investors might not sufficiently distinguish between the reliability of statements about past versus future performance, unless prompted to do so.

To examine the issue of how investors respond to forward-looking statements and cautionary disclaimers, we conduct a 1 x 3 between-subjects experiment in which we have participants read one of three versions of an earnings announcement. In one condition, the earnings announcement contains only the sort of historical performance that would not require a safe harbor disclaimer. In a second condition, the earnings announcement includes forward-looking statements, but without an accompanying disclaimer. Then, in our third condition, we provide participants with the same announcement as in our second condition, but now with an accompanying cautionary disclaimer about forward-looking statements. Our experimental design, therefore, allows us to compare treatment conditions that are not easily observable in naturally occurring environments because the vast majority of earnings announcements contain a cautionary disclaimer and, those which do not, typically omit the disclaimer because they contain no forward-looking statements.²

In our experiments, the forward-looking (historical) statements are generally positive (negative) in tone. This design choice is consistent with empirical evidence suggesting that forward-looking statements are generally more optimistic than historical statements (Bonsall, 2000).

² We provide empirical support for these assertions in Section III.
Bozanic, and Merkley 2014). This design also provides us with a way to indirectly assess perceived reliability because relying relatively less on forward-looking statements should lead to a less positive (or a more negative) reaction to the disclosure as a whole. In addition to being of high ecological interest and providing an indirect measure of reliability, this design choice also makes it more likely that investor participants who are aware of management incentives for impression management would be spontaneously skeptical of forward-looking statements, and so less likely to need a cautionary disclaimer.

The results of our first experiment indicate that, in the absence of providing a cautionary disclaimer, investors do not rate an earnings announcement as being less reliable when it includes forward-looking statements. However, they do raise their valuation judgments, both of which are consistent with the notion that unsophisticated investors find forward-looking statements credible and with regulators’ concerns that investors may not naturally distinguish between the reliability of historical statements and forward-looking statements. Moreover, investors perceive the same earnings announcements to be of lower reliability when it contains both forward-looking statements and a cautionary disclaimer about those forward-looking statements. Interestingly, the disclaimer lowers assessments of disclosure reliability, but not investors’ valuation judgments. Thus, we find mixed evidence about the effectiveness of a disclaimer.

Having provided some initial evidence about how unsophisticated investors react to forward-looking statements, and having shown the potential role for an effective cautionary disclaimer, we turn in Experiment 2 to the question of how to increase the impact of the cautionary disclaimer. In particular, we extend our Experiment 1 findings by examining two aspects of disclaimers that could influence their effectiveness: risk-factor specificity and
disclaimer placement. We focus on the specificity and placement of cautionary disclaimers because research in psychology suggests that these two factors could influence investor judgments and because these two factors represent important choice variables over which companies have control.

Historically, courts have at times denied companies the safe harbor because of a failure to discuss the specific risks related to their forward-looking statements, suggestive of a tension between managers’ preference to use vague, boilerplate language in an attempt to satisfy the disclosure requirement and regulators’ and courts’ preference that companies be more specific in their disclaimers.\(^3\) If the goal is to increase the cautionary impact of disclaimers, research in psychology would support a push for increased specificity. For example, prior work suggests that detailing specific risks increases the perceived likelihood of their occurrence (e.g., Tversky and Koehler 1994; Rottenstreich and Tversky 1997; Van Boven and Epley 2003). Whether this will lead investors to actively disbelieve or discount the related forward-looking statements when forming a valuation judgment remains an open question. The call for greater specificity is also supported by recent archival research suggesting that analysts who follow firms with more specific risk-factor disclosures are better able to assess fundamental risk (Hope, Hu, and Lu 2014).

Regardless of risk specificity, disclaimers can logically appear at either the beginning or the end of disclosures that contain forward-looking statements, and we provide empirical evidence indicating that both locations get utilized, at least to some degree.\(^4\) Placement is

\(^3\) See, e.g., Slayton v. American Express Company et al., No. 08-5442-cv (2d Cir. 2010); Asher v. Baxter Int’l, Inc., 377 F.3d 727 (7th Cir. 2004); and Harris v. Ivax 182 F.3d 799 (11th Cir. 1999).

\(^4\) As will be discussed in greater detail in Section III, results from a small-sample archival analysis suggest that cautionary disclaimers are typically placed at the end of earnings announcements but at the beginning of conference calls. There is wider variation in the placement of disclaimers within the 10-K and MD&A.
important because the choice to make these disclaimers salient could affect the acquisition and weighting of these disclaimers. However, the directional effect of placement is less clear. Discussing risks at the beginning of a disclosure might reduce the perceived reliability of forward-looking statements by highlighting that the forward-looking statements might not be realized and by sensitizing investors to the difference between these statements and statements about historical performance before they process that information. However, another possibility is that encountering a cautionary disclaimer at the end of a disclosure might cause investors to view management as less forthcoming or might make risk factors loom large as investors form their overall impression of a disclosure. Empirical evidence about the effects of specificity and placement could provide insight into whether regulators’ focus on specificity is warranted and whether the placement of disclaimers should receive additional consideration.

In analyzing the results of Experiment 2, we find that participants view disclosures as less reliable when the cautionary disclaimer discusses specific risks and also when the cautionary disclaimer appears at the end of the disclosure. In addition, we observe an overall effect of placement on participants’ firm valuations; but, interestingly, specificity does not have an overall effect on those valuations. While we view it with a degree of caution, we find this last result particularly surprising, given the regulatory push to discuss specific risks in cautionary disclaimers. We discuss potential explanations for this pattern of results in the conclusion.

Our findings complement prior work that examines the role of cautionary disclaimers in building a safe harbor for forward-looking disclosures. Whereas prior work focuses primarily on firms’ use of cautionary disclaimers and the effect of the Reform Act on firms’ willingness to provide forward-looking disclosures (see, e.g., Johnson, Kasznik, and Nelson 2001; Nelson and Pritchard 2007), our findings shed light on how investors react to forward-looking statements in
the presence or absence of cautionary disclaimers required by the Reform Act. Our evidence suggests that investors are naturally credulous of forward-looking statements and do not spontaneously distinguish between the reliability of forward-looking and historical performance in the absence of a disclaimer. However, we find that investors better distinguish between the reliability of forward-looking and historical performance when a disclaimer is present and particularly when the cautionary disclaimer appears at the end of a disclosure. Given that cautionary disclaimers generally appear at the end of earnings announcements, these effects might contribute to the muted market reactions to forward-looking statements in earnings announcements documented by recent work (Bonsall et al. 2014).

Our findings should also be of interest to managers and regulators. While firms often place cautionary disclaimers at the end of earnings announcements, our findings suggest that they might benefit from placing these disclaimers at the beginning of disclosures. Further, evidence that discussing specific risks in disclaimers does not appear to have a large, negative effect on investors’ firm evaluations should increase managers’ willingness to provide less generic disclaimers, especially if doing so would provide greater protection ex post. However, this finding also begs the question – why is specificity required for safe harbor if it has little impact on investors’ overall reactions to firm disclosures? Finally, as the FASB makes progress on their presentation and disclosure project, our findings might also provide insight about the role and presentation of cautionary language in firm disclosures.

One limitation of our present study is that we focus on investors’ ex ante reactions. As such, we are unable to address the question of how investors, juries, judges, and/or others are influenced by the characteristics of cautionary disclaimers in light of an ex post negative realization. That said, if prominently displaying a detailed cautionary disclaimer is most likely to
benefit managers in an *ex post* negative situation, then, in light of our present results, providing these types of disclaimers might be a win-win for managers.

The remainder of this paper proceeds as follows. Section II provides background information and develops our hypotheses. Section III reports a small-sample archival analysis of the location of cautionary disclaimers in various types of disclosures. Sections IV and V describe methods and results for Experiments 1 and 2, respectively. Section VI concludes.

**II. BACKGROUND AND DEVELOPMENT OF HYPOTHESES**

**Forward-Looking Statements and Cautionary Disclaimers**

Following the passage of the Private Securities Litigation Reform Act of 1995 (“the Reform Act”), firms became more willing to provide forward-looking information even when facing high litigation risk (Johnson, Kasznik, and Nelson 2001). However, while investors and regulators encourage firms to provide forward-looking information in their narrative disclosure (PricewaterhouseCoopers 2007; SEC 2003), forward-looking information is generally more uncertain and less verifiable than historical information. Whereas historical financial performance reporting is subject to compliance with U.S. GAAP, IFRS, or other national standards, and (for public companies) subject to an independent audit, there is much less guidance over the content and form of forward-looking statements. To protect investors from unduly relying on forward-looking statements, the Reform Act’s safe harbor provision requires firms to provide cautionary disclaimers that warn investors that forward-looking statements might not ultimately be realized.

While forward-looking statements are inherently less reliable than historical information, it is an open question whether investors spontaneously discount forward-looking statements. For
example, prior work in psychology suggests that individuals may fail to consider the reliability of information unless prompted to do so and, more generally, that knowledge-based validation requires thoughtful and slow processes that occur only under specific conditions (e.g., Gilbert 1991; Gilbert, Tafarodi, and Malone 1993; Chen and Chaiken 1999; Petty and Wegener 1999). Consistent with this idea, forward-looking statements must be accompanied by cautionary disclaimers to qualify for safe harbor, suggesting that regulators believe that investors may not spontaneously discount forward-looking statements in the absence of a cautionary disclaimer.

Given prior psychological theory and extant regulator concerns about the need for cautionary disclaimers, we hypothesize that investors will distinguish between the reliability of forward-looking and historical statements, but that this will be incomplete relative to when a cautionary disclaimer is included in the disclosure:

\[ H1: \text{ Forward-looking statements decrease the perceived reliability of disclosures.} \]

\[ H2: \text{ Cautionary disclaimers further decrease the perceived reliability of disclosures that contain forward-looking statements.} \]

Note that, while it is theoretically possible to observe simultaneous support for both of our hypotheses, support for (or failure to support) H1 would likely make it harder (easier) to observe support for H2. Thus, while we have two directional predictions for perceived reliability, we believe the important result from a policy perspective is to understand the total result. In addition, the effectiveness of a disclaimer is also an open question. For example, investors might simply ignore cautionary disclaimers if they view disclaimers as largely consisting of boilerplate language.
Our second hypothesis also raises the question of where the disclaimer should appear in the disclosure. As we discuss in Experiment 2, psychological theory suggests the choice of placement is important. However, our first concern in designing Experiment 1 was to understand what design choice would have the most ecological validity. For that we, conducted a small-sample archival analysis, discussed next.

III. SMALL-SAMPLE ARCHIVAL ANALYSIS

In order to better understand the characteristics of cautionary disclaimers in practice, we first report the results of a small-sample archival analysis. After randomly selecting 100 firms from the S&P 500, we hand collected each firm’s most recent earnings announcement, conference call transcript, and 10-K. We then located the cautionary disclaimer(s) in each disclosure. As indicated in Figure 1, Panel A, the cautionary disclaimer appeared at the end of the earnings announcement 96% of the time and at the beginning of the earnings announcement 3% of the time. One firm did not provide a cautionary disclaimer in its earnings announcement. Upon examination, this particular earnings announcement did not contain any forward-looking statements. Overall, the results indicate that cautionary disclaimers generally appear at the end of earnings announcements. As will be described in Section IV, this latter finding provides guidance for designing Experiment 1 to examine how cautionary disclaimers affect investors’ judgments.

[INSERT FIGURE 1]

While cautionary disclaimers almost uniformly appear at the end of earnings announcements, the same is not true for other types of disclosures. As indicated in Figure 1, Panel B, cautionary disclaimers appear at the beginning of every conference call in our sample.
In contrast, there is wide variation in the placement of cautionary disclaimers within the 10-K.\(^5\) As will be described in Section V, this result provides motivation for examining how the placement of cautionary disclaimers affects investors’ judgments in Experiment 2.

**IV. EXPERIMENT 1**

*Design*

We test our hypotheses using a 1 x 3 between-subjects experimental design in which participants evaluate a fictitious cola company (“The Moore Cola Company”) after reading a firm disclosure. The firm disclosure consists of an earnings announcement indicating that the firm performed relatively poorly in the current quarter but that future performance is expected to improve (see Appendix A). This design choice reflects the empirical tendency for firms’ forward-looking statements to be more optimistic than historical statements (Bonsall et al. 2014). Given management incentives to engage in impression management, this design choice also makes it more likely that investors might spontaneously discount the reliability of forward-looking statements, potentially reducing the need for a cautionary disclaimer. In addition, we chose to make the forward-looking statements uniformly positive so that higher (lower) reliance on the forward-looking statements should lead to higher (lower) evaluations of the firm.

Participants are randomly assigned to one of three experimental conditions:

- In the No FLS condition, the earnings announcement contains only historical statements and so would not require a cautionary disclaimer about forward-looking statements for safe harbor under the Reform Act.

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\(^5\) Cautionary disclaimers appear at various locations within the 10-K. The most common locations are at the beginning of the 10-K, at the beginning of Section 7 (MD&A), and at the end of Section 7. However, they sometimes appear in a variety of other locations and sometimes appear in multiple locations within the 10-K.
• In the FLS without Disclaimer condition, the earnings announcement contains the same historical statements as our first condition along with some additional forward-looking statements. Inconsistent with the requirements of the Reform Act, the earnings announcement does not contain a cautionary disclaimer.

• In the FLS with Disclaimer condition, the earnings announcement contains the same statements as the previous condition along with a cautionary disclaimer about forward-looking statements (See Appendix B). In Experiment 1, we place the cautionary disclaimer at the end of the earnings announcement, consistent with the evidence presented in Section III about common practice for earnings announcements.

Participants

Following several recent studies in accounting (Dworkis 2012; Koonce, Miller and Winchel 2014; Rennekamp 2012; Jackson, Rowe and Zimbelman 2014), participants in our experiment are 121 individuals recruited from Amazon’s Mechanical Turk platform.\(^6\) Since our task requires that participants be able to read and understand English and pay careful attention to the task, we recruit participants within the U.S. who have an approval rate of at least 95 percent. On average, our participants are 37.9 years old, and have 15.3 years of full-time work experience. Forty-six percent of our participants are female, and we paid each participant $1.00 for completing the experiment. The median participant took 5.4 minutes to complete the task.

\(^6\) Amazon’s Mechanical Turk (AMT) is an Internet crowdsourcing marketplace that allows “Requesters” to pay “Workers” to perform various tasks. Social scientists increasingly use AMT to recruit participants for studies because the participant pool is large, readily accessible, and at least as representative of the U.S. population as more traditional participant pools (for a review, see Mason and Suri 2012). Importantly, a wide range of JDM findings have been reliably replicated using this participant pool (Paolacci, Chandler, and Ipeirotis 2010; Horton, Rand, and Zeckhauser 2011; Krische 2014), and AMT provides a review and rating system that incentivizes Workers to pay careful attention to tasks.
Procedures

**Background Information and Initial Valuation.** We randomly assigned each participant to one of our three experimental conditions. The task began with participants first reading background information about The Moore Cola Company. We then elicited an initial judgment about the appropriate common stock valuation for the firm. More specifically, we asked participants to indicate on a 101-point scale what they believe to be an appropriate common stock valuation for the firm, ranging from 0 (“Low”) to 100 (“High”) (Koonce and Lipe 2010; Rennekamp 2012).

**Earnings Announcement and Revised Valuation.** Next, we provided participants with a press release announcing earnings for The Moore Cola Company. Participants were encouraged to “take the time to thoroughly review the press release in order to answer the questions that [would] follow.” When participants proceeded to the following page, they saw the press release for the earnings announcement, the exact form of which depended on each participant’s treatment condition. After they finished reviewing the earnings announcement, we asked participants to provide a revised judgment about the appropriate common stock valuation for the firm on the same 101-point scale as their initial valuation judgment.

**Disclosure Reliability.** In order to assess whether participants distinguish between the reliability of forward-looking and historical statements, we also ask participants to provide a more direct measure of their perceptions of disclosure reliability. To assess participants’ perceptions of disclosure reliability, we ask participants to indicate on a 7-point scale the extent to which they agree with the statement: “I felt like I could rely on the information in the press release” (1 = “Strongly Disagree”; 7 = “Strongly Agree”). This measure reflects the idea that
investors react less to disclosures when they feel those disclosures are less reliable (e.g., Rennekamp 2012).

**Additional Measures.** In addition to influencing participants’ perceptions of disclosure reliability, it’s also possible that our manipulations could affect perceptions of management credibility. To assess perceptions of management credibility, participants rate managers’ competence and trustworthiness on 7-point scales. The scale endpoints were labeled “Very Incompetent” (1) and “Very Competent (7) and “Very Untrustworthy” (1) and “Very Trustworthy” (7), respectively. Participants also rate the readability of the disclosure on a 7-point scale.7

**Results**

To examine whether forward-looking statements and cautionary disclaimers affect investors’ perceptions of disclosure reliability, we first examine participants’ responses when we explicitly ask them to rate disclosure reliability (*Disclosure Reliability*). Table 1 Panel A presents descriptive statistics for these ratings. As indicated in Panel B, we do not find support for H1 as adding forward-looking statements to the disclosure does not decrease *Disclosure Reliability* ($p = 0.262$, one-sided). This suggests that participants do not appear to spontaneously discount the reliability of disclosures that contain forward-looking statements. However, we do find support for H2. Specifically, we find that *Disclosure Reliability* is lower when a disclosure with forward-looking statements also contains a cautionary disclaimer ($p = 0.035$, one-sided). Similarly, *Disclosure Reliability* is lower when the disclosure contains both forward-looking statements and a disclaimer than when the disclosure contains neither ($p = 0.006$, one-sided). These results

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7 Our manipulations do not affect participants’ ratings of management’s competence ($p = 0.898$, two-sided), management’s trustworthiness ($p = 0.626$, two-sided), or the disclosure’s readability ($p = 0.607$, two-sided).
suggest that investors discount the reliability of disclosures containing forward-looking statements, but only when that disclosure also contains a cautionary disclaimer. Assuming that forward-looking statements do, in fact, reduce the reliability of disclosures, these results indicate that investors might be insufficiently skeptical of forward-looking statements in the absence of disclaimers.

[INSERT TABLE 1]

Our above analyses indicate that cautionary disclaimers help investors to distinguish between the reliability of disclosures that do and do not contain forward-looking statements when investors are explicitly asked to rate reliability. We next examine participants’ valuation judgments as an alternative measure of participants’ reliance on forward-looking statements. Because valuation judgments were measured before explicitly asking participants to rate disclosure reliability, this alternative measure allows us to indirectly assess whether participants are spontaneously skeptical of forward-looking statements. Because the forward-looking statements are all positive, observing higher valuation judgments when forward-looking statements are present would indicate that participants are relying on the forward-looking statements. Similarly, observing lower valuation judgments when a disclaimer is present would suggest it decreases reliance on the forward-looking statements.

Table 2 Panel A presents descriptive statistics for participants’ initial valuation judgment, revised valuation judgment, and the change in these judgments (*Valuation Change*). As indicated in Panel B, we find that *Valuation Change* is higher when the disclosure contains forward-looking statements (*p* = 0.055, one-sided), consistent with participants’ reliance on the positive forward-looking statements. Next, we test whether the cautionary disclaimer reduces *Valuation
Change. We find no evidence that the cautionary disclaimer reduces *Valuation Change* (p = 0.399, one-sided). In addition, *Valuation Change* is higher when a disclosure contains both forward-looking statements and a cautionary disclaimer relative to when a disclosure contains neither (p = 0.086, one-sided).

Because we lack a benchmark for the “right” amount of reliance on the forward-looking statements, we cannot definitively say whether participants are placing *undue* reliance on forward-looking statements in the absence of cautionary disclaimers. However, in the absence of a cautionary disclaimer, we find that positive forward-looking statements increase *Valuation Change*, but do not affect *Disclosure Reliability*. Taken together, this pattern of results is at least suggestive of investors potentially over-relying on forward-looking statements in the absence of a cautionary disclaimer.

**Supplemental Analysis**

The above evidence suggests that, in the absence of a cautionary disclaimer, positive forward-looking statements lead to more positive valuation judgments but do not affect perceptions of disclosure reliability. As such, the effect of the positive forward-looking statements on valuation judgments cannot be explained by differences in perceived disclosure reliability. In contrast, we find that the cautionary disclaimer affects participants’ perceptions of the disclosure’s reliability but does not significantly affect their valuation judgments. In this situation, it remains possible that the cautionary disclaimer affects their valuation judgments indirectly (through perceived disclosure reliability) (Shrout and Bolger 2002; Zhao, Lynch, and Chen 2010). In addition, the cautionary disclaimer could affect the extent to which participants
considered disclosure reliability when making their valuation judgments. As a supplemental analysis, we explore these possibilities.

In analyzing the relation between perceived reliability and valuation judgments, it is important to remember that our disclosure included both forward-looking and historical statements. As such, our measure of Disclosure Reliability captures a holistic assessment of reliability. This creates more of challenge when anticipating a relation between Disclosure Reliability and Valuation Change. If we observe a positive relation between Disclosure Reliability and Valuation Change, that would suggest that higher ratings of Disclosure Reliability indicate a relative increase in reliance on the positive forward-looking statements in the disclosure compared to any change in the reliance on the relatively negative historical statements.

In analyzing the influence of the cautionary disclaimer, we find marginally significant evidence that the cautionary disclaimer moderates the effect of Disclosure Reliability on Valuation Change ($p = 0.098$, one-sided). Specifically, when the disclaimer is present, Valuation Change is increasing in Disclosure Reliability ($p = 0.054$, one-sided), suggesting that participants incorporate their perceptions of disclosure reliability into their valuation judgments when the disclaimer is present. In contrast, when the disclaimer is absent, Valuation Change is not related to Disclosure Readability ($p = 0.777$, two-sided). While the cautionary disclaimer did not affect participants’ valuation judgments overall, this analysis provides evidence that the disclaimer

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8 The absence of a relation between Disclosure Reliability and Valuation Change when the disclaimer is absent is somewhat at odds with prior work that finds an association between these measures without a cautionary disclaimer (e.g., Rennekamp 2012). One possible explanation for this discrepancy is that, in the absence of a cautionary disclaimer, participants who perceived the disclosure as less reliable reduced their reliance on both the positive forward-looking information and the negative historical information.
increased participants’ propensity to consider the reliability of forward-looking statements, at least to some degree.

Discussion

Overall, we find evidence suggesting that, in the absence of a cautionary disclaimer, investors may over-rely on forward-looking information. In addition, we find somewhat mixed evidence about the effectiveness of cautionary disclaimers in reducing reliance on forward-looking statements. More specifically, when participants are explicitly asked to rate disclosure reliability, a cautionary disclaimer leads to lower ratings. However, the cautionary disclaimer does not appear to help investors spontaneously reduce their reliance on forward-looking statements when making valuation judgments before being explicitly asked to rate disclosure reliability. Together, our findings in Experiment 1 suggest that cautionary disclaimers are only somewhat effective in reducing reliance on forward-looking statements.

V. EXPERIMENT 2

Background and Theoretical Development

Given our findings from Experiment 1 about the mixed effectiveness of cautionary disclaimers, we turn next to an examination of how cautionary disclaimers could be made more effective. To guide our efforts, we draw on both psychological theory and existing practice in narrowing the scope of our investigation down to key characteristics of cautionary disclaimers about forward-looking statements: risk-factor specificity within the disclaimer and disclaimer placement within the disclosure. Specificity is of interest because both regulators and courts have placed emphasis on this characteristic. Placement is of interest because, as discussed in Section III, there is substantial variation in placement between types of disclosures and within some
types of disclosures, which suggests that firms have at least some level of discretion over this characteristic.

Specificity

The safe harbor provision indicates that managers and firms cannot be held liable for any written or oral forward-looking statement if the statement is identified as forward-looking and “is accompanied by meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those in the forward-looking statement.” Similarly, Congress has indicated that “boilerplate warnings” are not sufficient, suggesting that a standard disclaimer discussing general risks will not provide issuers with liability protection. Instead, “cautionary statements must convey substantive information about factors that realistically could cause results to differ materially from those projected in the forward-looking statement” (House of Representatives Conference Report 1995, p. 43). Regulators’ emphasis on providing meaningful cautionary language suggests that regulators view a discussion of specific, relevant, and important risks as a key component of cautionary disclaimers.

Research in psychology supports the idea that investors’ judgments might be influenced by a discussion of general vs. specific risks in a cautionary disclaimer. Specifically, theory and empirical evidence both indicate that individuals assign a higher subjective probability to an event when the event is decomposed or “unpacked” into more specific subsets, because unpacking risks increases the accessibility of various paths to the potential outcome (Tversky and Koehler 1994; Rottenstreich and Tversky 1997; Van Boven and Epley 2003). For example, Rottenstreich and Tversky (1997) asked participants to assess the probability that a randomly selected death is due to homicide rather than an accidental death. Participants assessed a higher
probability of homicide when “homicide” was unpacked into “homicide by an acquaintance” and “homicide by a stranger.” That is, homicide seemed more likely when two subsets of homicide were considered rather than homicide as a whole.

While firms’ cautionary disclaimers must include meaningful cautionary statements in order to qualify for safe harbor, firms have discretion over the extent to which they unpack general risks into specific risks. For example, a firm could indicate that forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from historical experience and present expectations or projections. Alternatively, firms could unpack that discussion by also identifying some specific risks and uncertainties that could cause actual results to differ materially from historical experience and present expectations or projections (e.g., changes in the business environment, unfavorable general economic condition, ability to maintain brand image and corporate reputation, ability to achieve overall long-term goals, etc.). Identifying specific risks and uncertainties might induce caution by increasing investors’ subjective assessments of the probability that actual results might differ materially from historical experience and present expectations or projections.

\[ H3a: \text{Cautionary disclaimers decrease the perceived reliability of disclosures more when they discuss more specific risk factors.} \]

**Placement**

The placement of information can affect investors’ judgments by influencing whether that information is acquired, how that information is evaluated, and how that information is weighted (Maines and McDaniel 2000). For example, placing a cautionary disclaimer at the beginning (rather than at the end) of a disclosure might increase the likelihood that the information in the disclaimer is acquired. In addition, placement could affect *when* the disclaimer
is acquired (before vs. after processing the disclosure’s content). The timing of acquisition could affect the evaluation of the related disclosure content because information that is processed early can affect the processing of subsequent information (Russo et al. 2000; Wilks 2002). For example, processing a cautionary disclaimer before processing the related disclosure might lead investors to discount forward-looking statements more than processing the disclaimer at the end of a disclosure. This suggests that cautionary disclaimers might more effectively induce caution when placed at the beginning of a disclosure.

However, another possibility is that cautionary disclaimers might induce caution more when placed at the end of a disclosure. While forward-looking statements tend to be positive (Bonsall et al. 2014), cautionary disclaimers describe reasons those positive statements might not be realized. Placing a disclaimer at the end of a disclosure might be perceived as less forthcoming than placing it at the beginning of a disclosure, which could lead investors to view managers as being less credible. In addition, when a disclaimer appears at the end of a disclosure, the disclosure ends with a focus on risk and uncertainty rather than optimism about the future. This could decrease the perceived reliability of the disclosure and increase the weight the disclaimer itself receives in subsequent evaluations of the firm (e.g., Miller and Campbell 1959). Overall, the literature provides a mixed view of how placement might affect the impact a cautionary disclaimer on investors’ willingness to rely on the disclosure and perceptions of management credibility.

\textit{H3b: The placement of a cautionary disclaimer at the beginning or end of a disclosure alters the perceived reliability of that disclosure.}

H3b suggests the placement of a cautionary disclaimer might increase or decrease the effectiveness of that cautionary disclaimer. This suggests that placement might also moderate the
effectiveness of other characteristics of cautionary disclaimers. In particular, if a cautionary disclaimer affects investors’ judgments more when placed at the beginning (or end) of a disclosure, it’s possible that the placement might also magnify the effect of discussing specific risks at that point within the disclosure.

\[ H3c: \text{The placement of cautionary disclaimers moderates (i.e., magnifies or dampens) the effect of discussing specific risks on the perceived reliability of disclosures.} \]

Research Method

Design

Except as otherwise noted, the experimental design and procedures for Experiment 2 are the same as Experiment 1. We test our hypotheses using a 2 x 2 between-subjects experimental, manipulating whether the cautionary disclaimer in a firm disclosure (1) appears at the beginning or end of the disclosure and (2) whether it discusses general or specific risks and uncertainties that could cause actual results to differ materially from historical experience and present expectations or projections. In the general-risks condition, the cautionary disclaimer indicates that “[forward-looking] statements are subject to certain risks and uncertainties that could cause actual results to differ materially from The Moore Cola Company’s historical experience and our present expectations or projections.” In the specific-risks condition, the cautionary disclaimer unpacks these “certain risks and uncertainties,” by also indicating that “[these] risks include, but are not limited to, obesity and other health concerns; changes in the nonalcoholic beverages business environment; unfavorable general economic conditions in the United States or other major markets; our ability to maintain brand image and corporate reputation; our ability to achieve overall long-term goals; and other risks.” The specific and general cautionary disclaimers are presented in full in Appendix B.
**Participants**

We recruited 122 individuals recruited from Amazon’s Mechanical Turk platform. We again recruit participants within the U.S. who have an approval rate of at least 95 percent. On average, our participants are 33.5 years old, and have 12.9 years of full-time work experience. 38 percent of our participants are female. We paid each participant $1.00 for completing the experiment, and the median participant took 7.9 minutes to complete the task.

**Results**

Table 3 Panel A presents descriptive statistics for participants’ ratings of disclosure reliability. To test the effects of the specificity (H1) and placement (H2) of the cautionary disclaimer, we next analyze Disclosure Reliability using a 2 x 2 ANOVA (see Panel B). Consistent with conventional regulatory wisdom, we find that identifying specific risks in a cautionary disclaimer decreases Disclosure Reliability ($p = 0.004$, one-sided), providing support for H3a. In addition, as predicted by H3b, we find that the placement of the cautionary disclaimer marginally affects Disclosure Reliability ($p = 0.098$, two-sided), such that Disclosure Reliability is lower when the cautionary disclaimer appears at the end of the disclosure. However, we do not find support for H3c, as the specificity and placement of the cautionary disclaimer do not interact ($p = 0.449$, two-sided). This suggests that these two effects operate somewhat independently of each other.

[INSERT TABLE 3 HERE]
Table 4 Panel A presents descriptive statistics for participants’ initial valuation judgments, final valuation judgments, and change in valuation judgments. As indicated in Panel B, we find that Valuation Change is not affected by the specificity of the disclaimer (p = 0.721, two-sided). However, placing the disclaimer at the end of the disclosure marginally decreases Valuation Change (p = 0.079, two-sided). The specificity and placement of the disclaimer also do not interact (p = 0.800, two-sided).

[INSERT TABLE 4 HERE]

Supplemental Analyses

In Experiment 1, we found that Valuation Change was increasing in Disclosure Reliability when the earnings announcement contained a cautionary disclaimer. In Experiment 2, all four conditions included a cautionary disclaimer, and we again find that higher ratings of Disclosure Reliability lead to higher changes in valuation (p = 0.004). This relation does not seem to depend on the form of the cautionary disclaimer as specificity and placement do not moderate the effect of Disclosure Reliability on Valuation Change (all p > 0.212, two-sided). In addition, when analyzing whether the path through which our manipulated variables influence valuation judgments, we find that specificity affects participants’ valuation judgments indirectly through Disclosure Reliability (p = 0.026, one-sided, not tabulated), but the indirect effect of placement is not significant (p = 0.152, two-sided, not tabulated).

In addition to affecting perceptions of disclosure reliability, we find that participants’ ratings of Management Credibility are lower when the disclaimer discusses specific risks (p = 0.066, one-sided, not tabulated) and is placed at the end of the disclosure (p = 0.024, two-sided, not tabulated).

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9 Specificity and placement do not affect initial valuations as main effects or as an interaction (all p > 0.598, two-sided, not tabulated).
In addition, we find that specificity indirectly affects Valuation Change (through Management Credibility) (p = 0.082, one-sided) as does placement (p = 0.057, two-sided).\textsuperscript{11}

**Discussion**

Overall, our results in Experiment 2 indicate that cautionary disclaimers are most effective making investors sensitive to the lower reliability of forward-looking statements when those disclaimers discuss specific-risk factors at the end of the disclosure. We find the directional effect of disclaimer placement interesting and suggest that it could arise for at least two reasons. First, placing a disclosure at the end of the disclosure might cause the disclaimer to loom large in investors’ minds (i.e., a type of recency effect). Alternatively, placing a disclosure at the end might signal that management is less forthcoming than if they had led off with the disclaimer. Since a recency effect would be more likely to moderate the effect of specificity, our failure to find support for an interaction between specificity and placement suggests the signaling explanation may be more likely to be at play. Further, as discussed above, we also find some evidence that disclaimer placement affects participants’ valuation judgments through their perceptions of management credibility.

Despite evidence that the specificity and placement of a cautionary disclaimer indirectly affect participants’ reactions to the earnings announcement, the total effect is marginally significant for placement, and not significant for specificity. Thus, our results indicate that the characteristics of a cautionary disclaimer can have strong effects on perception of disclosure.

\textsuperscript{10}Management Credibility is constructed by averaging each participant’s rating of management competence and trustworthiness. The specificity and placement do not interact to affect Management Credibility (p = 0.765, two-sided). We also analyzed perceived readability and found that neither disclaimer specificity nor placement affects disclosure readability, nor do they interact (all p > 0.156, two-sided).

\textsuperscript{11}When we include Disclosure Reliability and Management Credibility in a structural equations model, the model fit is very poor (p < 0.001, two-sided). While these measures represent distinct constructs, we are unable to reliably distinguish between the indirect effects of our manipulations through these two paths.
reliability, but that participants’ valuation judgments are not particularly sensitive to the specificity of cautionary disclaimers, or even the presence or absence of those disclaimers. We discuss possible implications for this pattern of results in the conclusion.

VI. CONCLUSION

Using two experiments, we examine how investors react to forward-looking statements and how these reactions are influenced by characteristics of cautionary disclaimers about forward-looking statements. In Experiment 1, we provide evidence that, in the absence of a cautionary disclaimer, investors do not rate an earnings announcement as being less reliable when it includes positive forward-looking statements, but they do raise their valuation judgments. Both pieces of evidence suggest that unsophisticated investors are largely credulous of forward-looking statements. These results are perhaps particularly surprising, given our setting, wherein managers are presenting positive forward-looking statements in response to an otherwise negative earnings announcement. In contrast, investors do report a decline in the reliability of an earnings announcement when it contains both forward-looking statements and a cautionary disclaimer about such statements. Thus, we find fairly strong evidence that unsophisticated investors do not spontaneously distinguish between the reliability of historical statements and forward-looking statements. Interestingly, the disclaimer lowers assessments of disclosure reliability, but not investors’ valuation judgments.

Given our mixed evidence about the effectiveness of a disclaimer in Experiment 1, we conduct a second experiment to examine whether disclaimers can be made more effective. Our results indicate that cautionary disclaimers are most effective in making investors sensitive to the lower reliability of forward-looking statements when those disclaimers discuss specific-risk
factors at the end of the disclosure. However, across both experiments, we find only limited evidence that disclaimers are effective in altering investor’s valuation judgments.

One possible explanation for our valuation results is that our measure eliciting participants’ valuation judgments is simply noisy. However, we reduce noise in our dependent measure by asking for initial valuation judgments, and our sample size is similar to prior work that uses this measure (e.g., Asay, Libby, and Rennekamp 2014). Another possibility is that our manipulations were not strong enough to observe their effect on valuation judgments. For example, we could have included even more specific risks in the cautionary disclaimer. However, our manipulations significantly affect our measure of disclosure reliability, suggesting that our manipulations were strong enough to affect other judgments.

Taken as a whole, our results raise questions about whether cautionary disclaimers should be required for firms to qualify for the safe harbor and whether the content of those disclaimers should affect litigation outcomes. When forward-looking statements are ultimately not realized, the success of a firm’s motion to dismiss depends, at least in part, on its cautionary disclaimer. In contrast, our findings call into question the materiality of those disclaimers if they have a limited impact on investors’ valuation judgments when disclosures are originally issued. However, we acknowledge that these potential implications should be viewed with some degree of caution, as cautionary disclaimers may have a more material effect in other settings or with a different group of investors. We believe additional research in this area is warranted.
APPENDIX A: EARNINGS ANNOUNCEMENT
(Underlined portions were omitted in the No FLS condition in Experiment 1)

MIAMI, Florida -- February 15, 2014 -- The Moore Cola Company (NYSE: MCC) today reported second quarter and year-to-date 2013 results. Jonathan Clark, Chairman and Chief Executive Officer of The Moore Cola Company said, “Our second quarter volume results came in just below our expectations, reflecting an ongoing challenging global macroeconomic environment and unusually poor weather conditions in the quarter.”

CEO Jonathan Clark continued, “While we are not happy with our performance, we did gain global volume and value share in total nonalcoholic ready-to-drink beverages as well as in sparkling and still beverages in the quarter.”

CEO Jonathan Clark concluded, “Despite the headwinds in the quarter, we expect future improvement in our results, with current dynamics leading us to believe that our performance will be better in the second half of the fiscal year. We remain committed to our 2020 Vision and confident in our system’s ability to execute with precision around the world. In this context, we remain firmly focused on investing alongside our global bottling partners to strengthen our system for the future, to deliver the brands and beverages that consumers love and to achieve our long-term performance goals.”

Volume growth in the quarter was below the Company's expectations due to a confluence of factors that collectively made for a challenging second quarter. Slow economies in Europe, Asia and Latin America, and historically wet and cold weather conditions across multiple regions impacted consumer spending and, consequently, overall industry performance. As we look ahead to the next several quarters, we continue to expect the industry and our business to be positively impacted by China’s expected economic growth. As a result of our efforts to evolve our strategies in China, we currently anticipate additional growth in our Asian business units in the second half of next year.

We are investing heavily in a new marketing initiative. These efforts are being led by marketing campaigns such as “Kiss a Can” in Europe and “Open Another” in North America. Fortunately, we expect that the creative excellence embodied by these marketing campaigns will have a noticeable impact on sales and profits worldwide in the near future.

Ready-to-drink tea volume grew 2% in the quarter, with steady performance of our brand across multiple markets worldwide. Packaged water volume grew 1% in the quarter, as we continue to focus on innovative and sustainable packaging. Energy drinks volume grew 4% in the quarter driven by growth across our global portfolio of energy brands. Juices and juice drinks volume declined 1% in the quarter. Overall, we expect the environment to show signs of improvement. The Company anticipates that performance will strengthen considerably as the year progresses.
APPENDIX B: CAUTIONARY DISCLAIMERS ABOUT FORWARD-LOOKING STATEMENTS

General Risk-Factors Disclaimer (Experiment 1 and Experiment 2)

Forward-Looking Statements
This press release may contain statements, estimates or projections that constitute forward-looking statements as defined under U.S. federal securities laws. Generally, the words believe, expect, intend, estimate, anticipate, project, will, and similar expressions identify forward-looking statements, which generally are not historical in nature. Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from The Moore Cola Company’s historical experience and our present expectations or projections.

You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. The Moore Cola Company undertakes no obligation to publicly update or revise any forward-looking statements.

Specific Risk-Factors Disclaimer (Experiment 2 Only)

Forward-Looking Statements
This press release may contain statements, estimates or projections that constitute forward-looking statements as defined under U.S. federal securities laws. Generally, the words believe, expect, intend, estimate, anticipate, project, will, and similar expressions identify forward-looking statements, which generally are not historical in nature. Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from The Moore Cola Company’s historical experience and our present expectations or projections.

These risks include, but are not limited to, obesity and other health concerns; changes in the nonalcoholic beverages business environment; unfavorable general economic conditions in the United States or other major markets; our ability to maintain brand image and corporate reputation; our ability to achieve overall long-term goals; and other risks. You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. The Moore Cola Company undertakes no obligation to publicly update or revise any forward-looking statements.
References


Harris v. Ivax 182 F.3d 799 (11th Cir. 1999).


Jackson, K. E., S. P. Rowe, and A. F. Zimbelman. 2014. Using "Relationship Reporting" to Increase Current Investors’ Response to Long-Term over Short-Term Performance. Working Paper, University of Illinois, Tulane University, and University of South Carolina.


Koonce, L., J. S. Miller, and J. Winchel. 2014. The effects of norms on investor reactions to derivative use. *Contemporary Accounting Research, Forthcoming*.


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Slayton v. American Express Company et al., No. 08-5442-cv (2d Cir. 2010).


FIGURE 1
Placement of Cautionary Disclaimers for 100 Randomly Selected Firms from the S&P 500

Panel A. Earnings Announcements

Panel B. Conference Calls

Figure 1 shows the distribution of the placement of cautionary disclaimers in the most recent earnings announcement (Panel A) and conference call (Panel B) for 100 firms randomly selected from the S&P 500. The earnings announcement without a cautionary disclaimer did not contain forward-looking statements.
TABLE 1
The Effect of FLS and Cautionary Disclaimers on Perceptions of Disclosure Reliability (E1)

Panel A: Descriptive Statistics for Reliability Measure – Mean [Standard Error]

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reliability</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No FLS</td>
<td>5.40</td>
<td>[0.16]</td>
</tr>
<tr>
<td></td>
<td>n = 43</td>
<td></td>
</tr>
<tr>
<td>FLS without</td>
<td>5.24</td>
<td>[0.19]</td>
</tr>
<tr>
<td>Disclaimer</td>
<td>n = 38</td>
<td></td>
</tr>
<tr>
<td>FLS with</td>
<td>4.78</td>
<td>[0.18]</td>
</tr>
<tr>
<td>Disclaimer</td>
<td>n = 40</td>
<td></td>
</tr>
</tbody>
</table>

Panel B: Planned Comparisons

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>F-stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No FLS &gt; FLS without Disclaimer (Effect of FLS)</td>
<td>1</td>
<td>0.41</td>
<td>0.262‡</td>
</tr>
<tr>
<td>FLS without Disclaimer &gt; FLS with Disclaimer (Effect of Disclaimer)</td>
<td>1</td>
<td>3.36</td>
<td>0.035†</td>
</tr>
<tr>
<td>No FLS &gt; FLS with Disclaimer (Effect of FLS + Disclaimer)</td>
<td>1</td>
<td>6.44</td>
<td>0.006†</td>
</tr>
</tbody>
</table>

† One-tailed equivalent.

This table presents results for Experiment 1, examining the effect of forward-looking statements and cautionary disclaimers on participants’ perceptions of disclosure reliability. We manipulate whether participants read an earnings announcement containing (1) only historical statements, (2) historical statements and forward-looking statements, or (3) historical statements, forward-looking statements, and a cautionary disclaimer. To measure perceived disclosure reliability, participants indicate their agreement with the statement “I felt like I could rely on the information in the press release” (1 = “Strongly Disagree”, 7 = “Strongly Agree”). Except as otherwise noted, p-values are non-directional.
### TABLE 2
The Effect of FLS and Cautionary Disclaimers on Valuation Judgments (E1)

#### Panel A: Descriptive Statistics for Change in Valuation – Mean [Standard Error]

<table>
<thead>
<tr>
<th>Condition</th>
<th>Initial Valuation</th>
<th>Final Valuation</th>
<th>Change in Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No FLS</td>
<td>54.67 [2.00]</td>
<td>44.40 [2.19]</td>
<td>-10.28 [1.63]</td>
</tr>
<tr>
<td></td>
<td>n = 43</td>
<td>n = 43</td>
<td>n = 43</td>
</tr>
<tr>
<td></td>
<td>n = 38</td>
<td>n = 38</td>
<td>n = 38</td>
</tr>
<tr>
<td>FLS with Disclaimer</td>
<td>51.23 [1.80]</td>
<td>44.60 [2.31]</td>
<td>-6.63 [1.97]</td>
</tr>
<tr>
<td></td>
<td>n = 40</td>
<td>n = 40</td>
<td>n = 40</td>
</tr>
</tbody>
</table>

#### Panel B: Planned Comparisons

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>F-stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No FLS &lt; FLS without Disclaimer (Effect of FLS)</td>
<td>1</td>
<td>2.61</td>
<td>0.055†</td>
</tr>
<tr>
<td>FLS without Disclaimer &gt; FLS with Disclaimer (Effect of Disclaimer)</td>
<td>1</td>
<td>0.06</td>
<td>0.399†</td>
</tr>
<tr>
<td>No FLS &lt; FLS with Disclaimer (Effect of FLS + Disclaimer)</td>
<td>1</td>
<td>1.88</td>
<td>0.086†</td>
</tr>
</tbody>
</table>

† One-tailed equivalent.

This table presents results for Experiment 1, examining the effect of forward-looking statements and cautionary disclaimers on participants’ valuation judgments. We manipulate whether participants read an earnings announcement containing (1) only historical statements, (2) historical statements and forward-looking statements, or (3) historical statements, forward-looking statements, and a cautionary disclaimer. To measure participants’ valuation judgments, participants were asked to provide judgments on a 101-point scale about the appropriate valuation for the firm (0 = “Low” to 100 = “High”) before and after receiving the earnings announcement, which contained our manipulations. Except as otherwise noted, p-values are non-directional.
TABLE 3
The Effect of FLS and Cautionary Disclaimers on Perceptions of Disclosure Reliability (E2)

Panel A: Descriptive Statistics – Mean and [Standard Error]

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<tr>
<th>Specificity</th>
<th>Placement</th>
<th>Beginning</th>
<th>End</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td></td>
<td>5.19 [0.22]</td>
<td>4.97 [0.23]</td>
<td>5.08 [0.16]</td>
</tr>
<tr>
<td></td>
<td>n = 32</td>
<td>n = 30</td>
<td>n = 62</td>
<td></td>
</tr>
<tr>
<td>Specific</td>
<td></td>
<td>4.71 [0.21]</td>
<td>4.13 [0.29]</td>
<td>4.40 [0.19]</td>
</tr>
<tr>
<td></td>
<td>n = 28</td>
<td>n = 32</td>
<td>n = 60</td>
<td></td>
</tr>
<tr>
<td>Combined</td>
<td></td>
<td>4.97 [0.15]</td>
<td>4.53 [0.19]</td>
<td>4.40 [0.19]</td>
</tr>
<tr>
<td></td>
<td>n = 60</td>
<td>n = 62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel B: Analysis of Variance

<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</td>
<td>13.143</td>
<td>1</td>
<td>13.143</td>
<td>7.35</td>
<td>0.004†</td>
</tr>
<tr>
<td>Placement</td>
<td>4.989</td>
<td>1</td>
<td>4.989</td>
<td>2.79</td>
<td>0.098</td>
</tr>
<tr>
<td>Specificity x Placement</td>
<td>1.032</td>
<td>1</td>
<td>1.032</td>
<td>0.58</td>
<td>0.449</td>
</tr>
<tr>
<td>Error</td>
<td>211.056</td>
<td>118</td>
<td>1.789</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

† One-tailed equivalent.

This table presents results for Experiment 2, examining the effect of the specificity and placement of cautionary disclaimers on participants’ perceptions of disclosure reliability. All participants read an earnings announcement containing a cautionary disclaimer. We manipulate whether the cautionary disclaimer (1) discusses general or specific risks and (2) is placed at the beginning or end of the earnings announcement. To measure perceived disclosure reliability, participants indicate their agreement with the statement “I felt like I could rely on the information in the press release” (1 = “Strongly Disagree”, 7 = “Strongly Agree”). Except as otherwise noted, p-values are non-directional.
The Effect of Disclaimer Specificity and Placement on Valuation Judgments (E2)

Panel A: Descriptive Statistics

<table>
<thead>
<tr>
<th>Specificity</th>
<th>Placement</th>
<th>N</th>
<th>Initial Valuation</th>
<th>Revised Valuation</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>Beginning</td>
<td>32</td>
<td>52.00</td>
<td>48.19</td>
<td>-3.81</td>
</tr>
<tr>
<td></td>
<td>End</td>
<td>30</td>
<td>54.03</td>
<td>46.87</td>
<td>-7.17</td>
</tr>
<tr>
<td>Specific</td>
<td>Beginning</td>
<td>28</td>
<td>52.93</td>
<td>50.46</td>
<td>-2.46</td>
</tr>
<tr>
<td></td>
<td>End</td>
<td>32</td>
<td>53.06</td>
<td>46.13</td>
<td>-6.94</td>
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</tbody>
</table>

Panel B: Analysis of Variance

<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</td>
<td>18.914</td>
<td>1</td>
<td>18.914</td>
<td>0.128</td>
<td>0.721</td>
</tr>
<tr>
<td>Placement</td>
<td>465.747</td>
<td>1</td>
<td>465.747</td>
<td>3.15</td>
<td>0.079</td>
</tr>
<tr>
<td>Specificity x Placement</td>
<td>9.520</td>
<td>1</td>
<td>9.520</td>
<td>0.064</td>
<td>0.800</td>
</tr>
<tr>
<td>Error</td>
<td>17467.881</td>
<td>118</td>
<td>148.033</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This table presents results for Experiment 2, examining the effect of the specificity and placement of cautionary disclaimers on participants’ valuation judgments. All participants read an earnings announcement containing a cautionary disclaimer. We manipulate whether the cautionary disclaimer (1) discusses general or specific risks and (2) is placed at the beginning or end of the earnings announcement. To measure participants’ valuation judgments, participants were asked to provide judgments on a 101-point scale about the appropriate valuation for the firm (0 = “Low” to 100 = “High”) before and after receiving the earnings announcement, which contained our manipulations. All p-values are non-directional.