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 investor perceptions of forward-looking statements in the presence and absence of cautionary disclaimers about forward-looking statements. Using two experiments, we first show that nonprofessional investors are largely credulous of forward-looking statements when a cautionary statement is omitted from an earnings press release. In addition, although including a cautionary disclaimer lowers their explicit perceptions of whether they can rely on the information in the press release, investors’ valuation judgments do not indicate a significant reduction in actual reliance. In Experiment 2, we explore additional ways to increase the impact of cautionary disclaimers, and we find that cautionary disclaimers which discuss specific risks at the end of a disclosure lead to the greatest reduction in investors’ explicit perceptions of reliability. However, we again find cautionary disclaimers to be much less effective in reducing actual reliance compared to their impact on investors’ beliefs about reliance. As such, our results raise questions about the merit of granting (denying) safe harbor to management on the basis of having provided (omitted) cautionary disclaimers that do little to induce caution among investors.

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

In this study, we examine how investors react to positive forward-looking statements and how their reactions are influenced by the presence of cautionary disclaimers. While financial reporting standards, internal control systems, and external audits all help ensure the integrity and fidelity of reported past performance, the same is not true for forward-looking statements. As such, a reasonable investor might judge disclosures to be of lower reliability when they contain positive forward-looking statements, and so view them with a greater degree of skepticism.¹ Indeed, this seems to have been the view embodied in the safe harbor provisions enacted in 1979 – and supported by the judiciary Bespeaks Caution Doctrine – which provided safe harbor for forward-looking statements made in good faith and on a reasonable basis (SEC 1994; Ripken 2005). The very language of reasonable forward-looking statements (e.g., words like believe, expect, or intend) might naturally induce a greater degree of caution among investors than if a disclosure contained only the type of language associated with backward-looking statements (e.g., were, did, have).

Despite the natural difference in language that accompanies forward- and backward-looking statements, 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, investors may not exhibit skepticism about forward-looking statements unless prompted to do so. Consistent with this view, the Private Securities Litigation Reform Act of 1995 (“the Reform Act”), in codifying and expanding the SEC’s safe harbor provisions of 1979, introduced a provision that absolves corporate actors of liability if they explicitly identify

¹ In the domain of financial accounting and reporting, reliability has been referred to as “the quality of information that allows those who use it to depend on it with confidence” (Storey and Storey 1998). We adopt a similar view and use information “reliability” to mean the extent to which investors believe information can be relied upon.
disclosures that contain 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)).

The view embodied in this legislation is one of investors being too trusting of forward-looking statements in the absence of disclaimers. However, the statute does not define the term “meaningful” and courts have not been consistent in their interpretation. Given the high frequency with which forward-looking statements are made, the significant protection afforded to firms granted safe harbor, and the significant legal liability that companies face if denied safe harbor, we believe it is important from a policy perspective to understand (1) whether the language of forward-looking statements naturally cues skepticism and, if not, (2) whether disclaimers are effective in triggering that skepticism.

We design two experiments that examine how investors respond to positive forward-looking statements and to cautionary disclaimers. We chose to make the forward-looking statements directionally valenced because this provides us with a way to assess participants’ reliance on them. For example, relying relatively more on forward-looking statements that are positive (particularly in comparison to the rest of the disclosure) will lead to a more positive (or less negative) reaction to the disclosure as a whole. We chose specifically to make the forward-looking statements positive because (1) empirical evidence suggests that forward-looking statements are generally more optimistic than backward-looking statements (Bonsall et al. 2014) and (2) investors, as potential plaintiffs, would likely be more successful in demonstrating economic harm and loss causation, as is necessary under Rule 10b-5, when relying on positive

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3 The House of Representatives clarified that “boilerplate warnings will not suffice as meaningful cautionary statements” (H.R. Conf. Rep. No. 104-369), but courts have at times granted safe harbor based on relatively generic cautionary statements (e.g., Smith-Gardner Securities Litigation, 214 F. Supp. 2d 1291 (S.D. Fla. 2002)).
statements that fail to materialize than if management were unduly pessimistic. Thus, our setting is of high ecological interest relative to the alternative settings.

In addition to utilizing a setting of high ecological importance, our design also operationalizes a setting where investors should be most cautious about relying on forward-looking statements, as positive information is generally considered to be less credible than negative information (e.g., Skinner 1994; Hutton, Miller, and Skinner 2003). To the extent that investors are naturally skeptical of forward-looking statements, such a setting maximizes our ability to observe that skepticism. If, instead, investors are not naturally skeptical of forward-looking statements, our setting would then maximize the potential for a cautionary disclaimer to effectively cue that skepticism.4 In both experiments, we focus on unsophisticated investors because these investors are presumably most at risk to over-rely on firms’ positive forward-looking statements.5

In Experiment 1, we conduct a 1 x 3 between-participants experiment in which participants read one of three versions of an earnings press release (hereafter, “the press release”), make a valuation judgment, and then assess the reliability of the information they saw (i.e., the extent to which they felt they could rely on that information). In one condition, the press release contains only historical performance reporting and backward-looking statements and so omits any cautionary disclaimer about forward-looking statements. In a second condition, the press release contains the same information as the press release in the first condition, but also

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4 For example, if we instead used negative forward-looking statements, the forward-looking statements would be inherently more credible, so participants would be less likely to be skeptical of the statements. As a consequence, a cautionary disclaimer would then be less likely to make investors incrementally more skeptical of those negative statements, making it difficult for us to assess the efficacy of (or the need for) cautionary disclaimers.

5 They were also the focus of regulatory concern and oversight as evidenced by the Wheat Commission’s Report, which stated “A real danger exists, in the Study’s judgment, that projections appearing in prospectuses and other documents filed under securities laws and reviewed by the Commission would be accorded a greater measure of validity by the unsophisticated than they would deserve” (SEC 1994).
includes positive forward-looking statements. In our third condition, we provide participants with the same press release 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 press releases contain a cautionary disclaimer and, those which do not, typically omit the disclaimer because they contain no forward-looking statements.⁶

The results of Experiment 1 indicate that, in the absence of providing a cautionary disclaimer, including positive forward-looking statements in the press release does not lead investors to rate the press release as being less reliable. However, including positive forward-looking statements in the press release does increase investors’ valuation judgments. Taken together, these two results suggest that unsophisticated investors find forward-looking statements credible, consistent with regulatory concerns that investors may not naturally distinguish between the reliability of backward- and forward-looking statements. In contrast, when the positive forward-looking statements are accompanied by a cautionary disclaimer, investors do rate the press release as being less reliable. However, the disclaimer does not decrease investors’ valuation judgments. Overall, this evidence suggests that cautionary disclaimers help investors recognize that positive forward-looking statements may be relatively unreliable, but only when they are explicitly prompted to consider reliability. Cautionary disclaimers do not appear to help investors incorporate this information into their valuation judgments.

⁶ For example, we hand-collected the most recent earnings press release for 100 firms randomly selected from the S&P 500. A cautionary disclaimer appeared in 99 of the 100 press releases. One firm did not provide a cautionary disclaimer in its press release. Upon closer examination, this particular press release did not contain any forward-looking statements.
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 cautionary disclaimers. In particular, we extend our Experiment 1 findings by examining two aspects of disclaimers that could influence their impact on investors: risk-factor specificity and disclaimer placement. We focus on risk-factor specificity because courts have determined that companies must discuss specific risks in order to qualify for the safe harbor and because prior work in psychology suggests that individuals perceive risks to be more likely when they are decomposed into their components (e.g., Tversky and Koehler 1994; Rottenstreich and Tversky 1997; Van Boven and Epley 2003). This suggests the possibility that discussing specific risks might induce a greater level of caution among investors. We focus on disclaimer placement because firms have some level of discretion over this choice variable and because psychological theory suggests that disclaimer placement could alter information processing, thereby magnifying or dampening the impact of disclaimer specificity (e.g., Maines and McDaniel 2000; Russo et al. 2000; Wilks 2002; Krische 2005).

The results of Experiment 2 indicate that participants view press releases containing positive forward-looking statements as less reliable when a cautionary disclaimer about those statements discusses specific risks and also when it appears at the end of the press release rather than at the beginning of the press release. In addition, we observe an overall effect of disclaimer placement on participants’ valuation judgments. However, specificity does not have an overall effect on those valuation judgments. 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

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For examples of some relevant court cases, see 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).
disclaimers. The placement of the disclaimer does not appear to moderate the effect of discussing specific risks. 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. Our evidence suggests that investors are naturally credulous of forward-looking statements and, in the absence of a disclaimer, do not distinguish between the reliability of forward-looking and backward-looking statements even when asked to explicitly consider that reliability. However, we find that investors better distinguish between the reliability of backward- and forward-looking statements when a disclaimer is present and particularly when the cautionary disclaimer appears at the end of a disclosure.

Our findings have implications for managers and policymakers. While firms overwhelmingly place cautionary disclaimers at the end of earnings press releases, 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. Sections III and IV describe methods and results for Experiments 1 and 2, respectively. Section V concludes.

**II. BACKGROUND AND DEVELOPMENT OF HYPOTHESES**

**Safe Harbors and Cautionary Disclaimers**

The safe harbor provisions enacted in 1979 (and supported by the judiciary Bespeaks Caution Doctrine) provided safe harbor for forward-looking statements if management made them in good faith and on a reasonable basis. Whereas the 1979 safe harbor provisions relied on the language of reasonable forward-looking statements to naturally induce a degree of caution among investors, the provisions of the Reform Act in 1995 put more of the onus on firms by providing safe harbor for forward-looking statements if management has identified that a disclosure contains forward-looking statements and included in the disclaimer meaningful cautionary language identifying risk factors that could cause actual results to differ from projections.
By doing so, the provisions of the Reform Act provided a clearer path to safe harbor and were meant to encourage firms to provide forward-looking statements by protecting firms and managers from frivolous litigation (House of Representatives Conference Report 1995). Consistent with these goals, firms became more willing to provide forward-looking statements following the passage of the Reform Act (Johnson et al. 2001) and forward-looking statements have subsequently been less likely to trigger securities litigation (Johnson, Nelson, and Pritchard 2007). In addition, while the Reform Act has not reduced the overall number of securities fraud class actions (Buckberg, Foster, Miller, and Plancich 2005; Perino 2003), a higher percentage of those actions are dismissed (Foster, Martin, Juneja, Dunbar, and Allen 1999).

The demand for forward-looking information reflects investors’ and regulators’ beliefs that this information improves decision-making in capital markets (PwC 2007; SEC 2003). That is, while the safe harbor provisions protect firms and managers from litigation, these protections have been made available because the forward-looking information is expected to benefit the capital markets. Indeed, the capital markets reacted positively to the passage of the Reform Act (Johnson, Kasznik, and Nelson 2000), suggesting that market participants viewed the provisions of the Reform Act as a net positive (though this was likely due more to a reduction in expected costs of litigation than to an increase in the flow of information from management).

While forward-looking information may shed light on firms’ future directions, forward-looking information can also be uncertain and unverifiable, even when made in good faith. For example, 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. In contrast, there is much less guidance over the content and form of forward-looking statements. Reflecting the uncertainty inherent in forward-looking statements, recent work finds that
forward-looking statements are less predictive of future firm value than backward-looking statements (Bonsall et al. 2014). As a result, some degree of caution is likely warranted and investors may naturally discount forward-looking information, particularly when forward-looking statements are positive in nature (e.g., Skinner 1994; Hutton, Miller, and Skinner 2003).

**Skepticism and Cautionary Disclaimers**

Despite these reasons to be skeptical of forward-looking statements, investors might sometimes fail to discount those statements. Prior work in psychology finds that individuals are naturally credulous of information and 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). Related work in psychology and accounting indicates that people often fail to account for the reliability of information when making judgments and decisions, creating a tendency to over-rely on low quality information (e.g., Griffin and Tversky 1992; Bloomfield, Libby, and Nelson 2000, 2003; Nelson, Bloomfield, Hales, and Libby 2001).

While a rational investor is likely to view forward-looking statements with a reasonable amount of caution, the Reform Act of 1995 seems to embody a more psychological perspective. By calling for explicit identification of forward-looking statements as well as cautionary disclaimers about those statements, the Reform Act implies that the language of forward-looking statements might not sufficiently induce caution among investors. In contrast, the safe harbor provisions enacted in 1979 (and supported by the judiciary Bespeaks Caution Doctrine) seem to have been designed for the rational investor, trusting the language of the forward-looking statements themselves to naturally induce a degree of caution among investors.
Given the unresolved nature of these two perspectives, we base our hypotheses on both. Our first hypothesis (capturing the spirit of 1979) predicts that investors will be skeptical of positive forward-looking statements even in the absence of a cautionary disclaimer. Our second hypothesis (capturing the view since 1995) predicts that this natural skepticism will be, at best, incomplete, and that a cautionary disclaimer will further increase investors’ skepticism of positive forward-looking statements.

\[ H1: \text{ Investors are skeptical of positive forward-looking statements even in the absence of a cautionary disclaimer. } \]

\[ H2: \text{ Investors are more skeptical of positive forward-looking statements that are accompanied by a cautionary disclaimer. } \]

Note that, while it is theoretically possible to observe simultaneous support for both of our hypotheses, finding support for H1 would likely make it difficult to find support for H2. That is, if investors are naturally skeptical of positive forward-looking statements, observing an incremental effect of cautionary disclaimers is unlikely. In addition, even if investors are naturally credulous of positive forward-looking statements, the effectiveness of a disclaimer is an open question. For example, investors might simply ignore cautionary disclaimers if they view disclaimers as largely consisting of boilerplate language. Thus, while our hypotheses outline two directional predictions for investors’ reliance on positive forward-looking statements, from a policy perspective, we believe it is important to understand the overall pattern of results.

\section*{III. EXPERIMENT 1}

\textit{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 press release 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 backward-looking statements (Bonsall et al. 2014). Given management incentives to engage in impression management, this design choice (as previously mentioned) makes it more likely that investors might naturally 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 press release contains only backward-looking statements and so would not fall under the safe harbor provisions of the Reform Act.
- In the FLS without Disclaimer condition, the press release contains the same backward-looking statements as our first condition along with some additional forward-looking statements. Inconsistent with the provisions of the Reform Act, the press release does not contain a cautionary disclaimer.
- In the FLS with Disclaimer condition, the press release contains the same statements as the previous condition along with a cautionary disclaimer about forward-looking statements (See Appendix B).  

Participants

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8 To inform our choice about where to place the disclaimer within the press release, we examined the location of the disclaimer for the 99 of 100 firms we randomly sampled from the S&P 500, which had included a disclaimer in the firm’s most recent earnings press release. The cautionary disclaimer appeared at the end of the press release for 96 of the firms and at the beginning of the press release for three firms. We, therefore, placed the disclaimer at the end of the press release, consistent with common practice.
Given our interest in understanding the efficacy of and the need for cautionary
disclaimers, we focus our study on the judgments of non-professional investors because this class
of investors is presumably most at risk of over-relying on positive forward-looking statements,
absent some sort of regulatory intervention. Following several recent studies in accounting that
study the judgments of non-professional investors (Dworkis 2012; Koonce, Miller and Winchel
2014; Rennekamp 2012; Jackson, Rowe and Zimbelman 2014), we recruit participants from
Amazon’s Mechanical Turk platform. In addition, recent archival research recruits participants
from Amazon’s Mechanical Turk and provides evidence that their perceptions of firms are
positively associated with future market returns (even after controlling for traditional
determinants of firm value) (Blankespoor, Hendricks, and Miller 2015), suggesting that the
perceptions of AMT participants are correlated with the views of a significant portion of the
marketplace participants.

Since our task requires that participants be able to read and understand English and pay
careful attention to the task, we recruit 121 participants from 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.

**Procedures**

**Background Information and Initial Valuation.** We randomly assigned each
participant to one of our three experimental conditions. The task began with participants first

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9 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.
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).

**Press Release 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, the exact form of which depended on each participant’s treatment condition. After they finished reviewing the press release, 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.

**Information Reliability.** In order to assess whether participants distinguish between the reliability of backward- and forward-looking statements, we ask participants to provide a direct assessment of their perceptions of the reliability of the information in the disclosure. Specifically, 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).^{10}

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^{10} By asking participants to rate their willingness to rely on the disclosure as a whole rather than on the forward-looking statements, we avoid prompting participants to specifically consider the reliability of forward-looking statements. Such a prompt would result in a weak test of the effect of the cautionary disclaimer and, worse, open the door to a potential demand effect by directing attention in a valuation task specifically to a question about forward-looking statements.
Additional Measures. In addition to influencing participants’ perceptions of information 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. Participants finish the experiment by answering debriefing questions.¹¹

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 (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 participants’ assessments of Reliability (p = 0.262, one-sided). This suggests that participants do not appear to naturally discount the reliability of disclosures that contain forward-looking statements. However, we do find support for H2. Specifically, we find that participants rate Reliability as being lower when a disclosure with forward-looking statements also contains a cautionary disclaimer (p = 0.035, one-sided). Similarly, 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 suggest that investors discount the reliability of disclosures containing forward-looking information. From a practical perspective, asking about disclosure reliability allows us to ask the same question in all three conditions, regardless of whether or not the disclosure contained forward-looking statements.

¹¹ These debriefing questions include a measure of participants’ investing experience as well as the number of accounting and finance classes participants have taken. None of these measures affect participants’ valuation judgments or disclosure reliability ratings either as main effects or in interaction with our manipulations (all p > 0.449, two-sided).
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, when investors are explicitly asked to consider the extent to which they felt they could rely on the information contained within a disclosure, cautionary disclaimers lead investors to rate disclosures that contain positive forward-looking statements as less reliable. We next examine participants’ valuation judgments as a measure of participants’ actual reliance on forward-looking statements. Because valuation judgments were measured before explicitly asking participants to rate Reliability, this alternative measure allows us to indirectly assess whether participants are naturally skeptical of positive forward-looking statements and whether cautionary disclaimers heighten their skepticism. 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, which is significantly negative when the press release does not contain the positive forward-looking statements (p < 0.001, two-sided, not tabulated), is significantly less negative when the disclosure contains forward-looking statements (p = 0.055,
one-sided). Together, these results indicate that participants rely on both the negative backward-looking statements and the positive forward-looking statements when forming valuation judgments. Next, we test whether the cautionary disclaimer reduces Valuation Change. We find no evidence that the cautionary disclaimer reduces Valuation Change \((p = 0.399,\text{ one-sided})\). 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 \((p = 0.086,\text{ one-sided})\).

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 decrease Reliability. Taken together, this pattern of results is suggestive of investors potentially over-relying on forward-looking statements and suggests that cautionary disclaimers may be of limited benefit in altering how investors’ valuation judgments are affected by positive forward-looking statements.

**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 backward- and forward-looking statements. As such, our measure of Reliability captures a holistic assessment of their willingness to rely on the information in the disclosure. The results of this analysis reveal marginally significant evidence that the cautionary disclaimer moderates the effect of Reliability on Valuation Change (p = 0.098, one-sided). Specifically, when the disclaimer is present, Valuation Change is increasing in 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 Reliability (p = 0.777, two-sided).\textsuperscript{12} While the cautionary disclaimer did not affect participants’ valuation judgments overall, this analysis provides evidence that the disclaimer increased participants’ propensity to reconsider relying on the positive forward-looking statements, at least to some degree.\textsuperscript{13}

\textsuperscript{12} 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 backward-looking information.

\textsuperscript{13} 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 readability (p = 0.607, two-sided).
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.

IV. 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. As we discuss next, we believe these two factors are of interest from both a practical and a theoretical perspective.

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**

Legal scholars, in criticizing current practice, have argued that placement could be used to make disclaimers more effective by increasing their prominence (Ripkin 2005). More generally, accounting research on financial reporting has shown that 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). As such, 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.

**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: 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.
Thirty-eight percent of our participants are female. We again paid each participant $1.00 for completing the experiment.

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 assessments of 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 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 Reliability ($p = 0.098$, two-sided), such that 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.\(^{14}\) 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 do not interact ($p = 0.800$, two-sided). Taken together, these findings indicate that cautionary disclaimers have the greatest cautionary impact when they discuss specific risks at the

\[^{14}\text{Specificity and placement do not affect initial valuations as main effects or as an interaction (all } p > 0.598, \text{ two-sided, not tabulated).}\]

23
end of a disclosure. However, cautionary disclaimers once again appear to have only a limited impact on valuation judgments.15

Supplemental Analyses

We find the directional effect of disclaimer placement interesting and suggest that it could arise for at least two reasons. First, placing a disclaimer 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 beginning might signal that management is more forthcoming by leading 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. Also consistent with a signaling explanation, we find that participants’ ratings of Management Credibility are higher when the disclaimer is placed at the beginning of the disclosure (p = 0.024, two-sided, not tabulated).16

In Experiment 1, we found that Valuation Change was increasing in Reliability when the press release contained a cautionary disclaimer. In Experiment 2, all four conditions include a cautionary disclaimer, suggesting the possibility that the disclaimers might indirectly affect participants’ valuation judgments even if its overall impact on those judgments is limited.

15 Participants’ valuation judgments and disclosure reliability ratings are not affected by participants’ investing experience or the number of accounting and finance classes participants have taken either as main effects or in interaction with our manipulations (all p > 0.144, two-sided).
16 Our measure of management credibility is constructed by averaging each participant’s rating of management competence and trustworthiness. The specificity of the disclaimer does not affect management credibility as a main effect (p = 0.133, two-sided), and does not interact with placement (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).
Consistent with this idea, we again find that higher ratings of *Reliability* are associated with higher changes in valuation (p = 0.004). This relation does not seem to depend on the form of the cautionary disclaimer because specificity and placement do not moderate the effect of *Reliability* on *Valuation Change* (all p > 0.212, two-sided). While the cautionary disclaimers seem to have a limited effect on participants’ valuation judgments overall, this analysis provides evidence that disclaimers increase participants’ propensity to consider their reliance on the positive forward-looking statements, at least to some degree.

**Discussion**

Overall, our results in Experiment 2 indicate that cautionary disclaimers most effectively sensitize investors to the lower reliability of forward-looking statements when those disclaimers discuss specific risk factors at the end of the disclosure. Our results indicate that the characteristics of a cautionary disclaimer can have relatively strong effects on perceptions of disclosure reliability, but participants’ valuation judgments are not particularly sensitive to the specificity of cautionary disclaimers, or even the presence or absence of those disclaimers. While some of our results (i.e., the effect of specificity on explicit perception of reliability) are consistent with recent judicial decision making and current regulatory guidance, other results provide important new insights into the debate about whether the current legislative provisions are a reasonable basis for providing safe harbor to firms and, if not, how to make disclaimers more effective. In particular, proposals to make disclaimers more prominent might have the opposite effect of that intended by legal scholars.

**V. 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 a press release 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 press release. In contrast, investors do report a decline in the reliability of a press release 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 naturally distinguish between the reliability of backward- 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 investors’ 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). In addition, this measure is
powerful enough to detect reactions to both the backward- and forward-looking statements contained in the press release. Another possibility is that our disclaimer 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 and disclaimer location directly affects the valuation judgment, suggesting that our manipulations were strong enough to generate detectable effects.

Taken as a whole, our results address questions raised in the debate about whether cautionary disclaimers should be sufficient for firms to qualify for the safe harbor and whether the content of those disclaimers should affect litigation outcomes (e.g., Ripken 2005). 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, with a different group of investors, or if better designed. For example, cautionary disclaimers might be more effective if they were better integrated within the disclosure so that they qualify specific forward-looking statements (rather than qualifying forward-looking statements more generally). In addition, disclaimers might be more effective when placed in close proximity to the forward-looking statements (rather than at the beginning or the end). We believe additional research in this area is both warranted and promising.
APPENDIX A: PRESS RELEASE
(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

Disclaimer of Forward-Looking Statements
(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.

Disclaimer of Forward-Looking Statements with Identification of Specific Risks
(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*.


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


TABLE 1
The Effect of FLS and Cautionary Disclaimers on Perceptions of Reliability (E1)

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

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reliability</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Condition</td>
<td>Reliability</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No FLS</td>
<td>5.40</td>
<td>[0.16]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FLS without Disclaimer</td>
<td>5.24</td>
<td>[0.19]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FLS with Disclaimer</td>
<td>4.78</td>
<td>[0.18]</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’ assessments of reliability (i.e., their willingness to rely on the information in the disclosure). We manipulate whether participants read a press release containing (1) only backward-looking statements, (2) backward-looking statements and forward-looking statements, or (3) backward-looking statements, forward-looking statements, and a cautionary disclaimer. To measure participants’ willingness to rely on the information in the disclosure, 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 a press release containing (1) only backward-looking statements, (2) backward-looking statements and forward-looking statements, or (3) backward-looking 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 press release, 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 Reliability (E2)

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

<table>
<thead>
<tr>
<th>Specificity</th>
<th>Placement</th>
<th>Beginning</th>
<th>End</th>
<th>Combined</th>
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</thead>
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<tr>
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<td></td>
<td></td>
<td></td>
</tr>
<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></td>
<td>n = 32</td>
<td>n = 30</td>
<td>n = 62</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></td>
<td>n = 28</td>
<td>n = 32</td>
<td>n = 60</td>
</tr>
<tr>
<td>Combined</td>
<td></td>
<td>4.97 [0.15]</td>
<td>4.53 [0.19]</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>n = 60</td>
<td>n = 62</td>
<td></td>
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</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’ assessments of reliability (i.e., their willingness to rely on the information in the disclosure). All participants read a press release 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 press release. To measure willingness to rely on the information in the disclosure, 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 4
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>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Valuation</td>
<td>Valuation</td>
<td></td>
</tr>
<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 (50.0)</td>
<td>48.19 (46.5)</td>
<td>-3.81</td>
</tr>
<tr>
<td></td>
<td>End</td>
<td>30</td>
<td>54.03 (50.0)</td>
<td>46.87 (44.0)</td>
<td>-7.17</td>
</tr>
<tr>
<td>Specific</td>
<td>Beginning</td>
<td>28</td>
<td>52.93 (50.0)</td>
<td>50.46 (49.0)</td>
<td>-2.46</td>
</tr>
<tr>
<td></td>
<td>End</td>
<td>32</td>
<td>53.06 (51.0)</td>
<td>46.13 (43.5)</td>
<td>-6.94</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>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 a press release 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 press release. 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 press release, which contained our manipulations. All p-values are non-directional.