Invest in What you Know?
How Investor-Customers React to Corporate Restatements

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ABSTRACT

It is increasingly common for individuals to be both investors in, and customers of, a company. Despite its prevalence, we have little understanding of whether these investor-customers’ investment judgments differ from those of investors-only. Using three experiments, we examine how investor-customers’ judgments differ from those of investors-only in the wake of an earnings restatement, and how investor-customers respond to company-issued disclosures that include favorable information designed to mitigate the effects of the restatement. Drawing on prior marketing research, we predict and find that investor-customers identify more strongly with the company and sell fewer shares in response to a restatement than investors-only. Further, unlike investors-only, investor-customers’ judgments are not influenced by favorable information in a company-issued disclosure. Our results have implications for companies that are actively encouraging investor-customer relationships and for investors themselves.

JEL Codes: G23; M41; M48; M49

Keywords: company-customer identification; investor attention; earnings restatements; corporate disclosures

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1. Introduction

Companies spend significant resources on marketing to create brand engagement with consumers (Turner, 2022). The goal of this engagement is to build a sense of community to create long-term commitment (e.g., Champniss, Wilson, & Macdonald, 2015). As such, sometimes, being a customer is more than just purchasing products but also involves having a shared identity with the brand or company (Sprott, Czellar, & Spangenberg, 2009). Relatedly, companies adopt strategies to shape their investor base by encouraging current customers to invest in the company’s stock, thus becoming “investor-customers” (Beyer, Larcker, & Tayan, 2014). Firms following this strategy believe that it creates a more loyal investor base (Kates, 2019; Drenik, 2021), which can potentially influence how these investor-customers react to corporate announcements. Although anecdotal evidence suggests that investor-customers can be beneficial to firms, prior literature is less clear. Our study addresses the lack of evidence on how the judgments of a specific type of investor-customer (one that feels a strong sense of shared identity with a firm) might differ from those of investors-only.

Investigating this issue is important because the prevalence of investor-customers is likely to continue increasing over time (IR Magazine, 2020). Investor-customers are typically retail investors who are more likely to invest in what they know and are more interested than institutional investors in receiving rewards for their loyalty (Drenik, 2021). Historically, companies did not have a mechanism for identifying their retail investors, even though they make up approximately 30% of an average U.S. company’s common stockholders (NIRI, 2020; McCrank, 2021). However, platforms like TiICKER and Stockperks now make it feasible for companies to reach retail investors directly. As a result, it is easier for companies to reward retail investors with free products, discounts, and perks in exchange for their loyalty, thereby growing the proportion of
retail investors that fit the investor-customer profile. Furthermore, cultivating the investor-customer relationship may strengthen their affective feelings toward the company (Grewal, Roggenveen, Sisodia, & Nordfalt, 2017). The possibility that such affinity toward the company spills over to one’s investment judgments is supported by prior literature that shows stock ownership by certain subgroups of investors increases their purchasing behavior for the company’s products (Bernard, Cade, and Hodge, 2018). Thus, one’s role as a particular stakeholder in a company may affect their behavior within a different stakeholder group. We further this literature by investigating the opposite scenario by asking whether one’s customer standing impacts their behavior as an investor, which has implications for companies with retail investors that are investor-customers and for investor-customers themselves if their judgments differ from those of investors-only.

To examine this issue, we conduct three experiments that focus on how (if at all) the judgments of investor-customers who feel a sense of shared identity with the company differ from those of investors-only in response to a financial event. Firms experience both positive and negative events that they must disclose. As negative events are more detrimental to firms, in this study, we examine how investor-customer relationships affect investment judgments after the announcement of negative events. Additionally, we investigate whether investor-customers respond differently than investors-only to a corporate mitigation strategy of including favorable information in a firm disclosure about the negative event.

We base our predictions on prior marketing research, which finds that customers often develop a sense of shared identity with companies from which they purchase. This shared identity often leads to more resilience to negative information about the company, provided that the negative information does not threaten the shared identity itself (e.g., Bhattacharya & Sen, 2003). We
predict that a shared identity often makes it difficult for investor-customers to separate their affinity for the company from their investment judgments.\footnote{For ease of exposition, going forward, we use the label of ‘investor-customer’ to refer to investor-customers that perceive a shared identity with the company.} Further, this may have implications with respect to whether investor-customers react differently to negative firm events than do those who are only investors in the firm.

We situate our research in a negative financial event context because it is less likely to threaten investor-customers’ sense of shared identity with the company. That is, the negative event is not related to the firm’s products – the potential source of identification – but is highly relevant from an investor perspective. This setting therefore lets us examine whether individuals who purchase products from a company allow their affinity as customers to affect their judgments as investors. In Experiment 1, we predict and find that investor-customers who perceive a shared identity with the company respond more favorably by selling fewer shares in response to a negative financial event than do investors-only. Further, we find that this result holds for two popular companies – Nike and Starbucks.

In Experiment 2, we replicate the results of Experiment 1 using another popular company – Apple. Further, we predict and find that the propensity of investor-customers to sell shares after a negative financial event does not depend on whether a company-issued press release includes favorable information designed to mitigate negative reactions to the event. This finding is consistent with an overall affinity for the company. In contrast, investors-only sell more shares in response to the event but are also more sensitive to information in the company-issued press release. In our experiment, they report that they would sell more shares when the press release does not include favorable information than when it does include favorable information.
Experiment 3 replicates the results of E1 and E2 but with a hypothetical company. Further, Experiment 3 provides process evidence by examining how shared identity changes in response to a negative event. Consistent with our theory, we find that investors-only who do not receive favorable information in a press release exhibit the greatest decrease in their shared identity with the company following a negative event. Taken together, our experiments show that investor-customers sell fewer shares than investors-only in response to a negative financial event. We also find that company efforts to mitigate the effects of the negative event by disclosing favorable language minimize the negative reaction of investors-only but do not further improve the reactions of investor-customers because investor-customers give the company the benefit of the doubt regardless of whether they receive favorable language.

Our results have implications for accounting researchers, firms, and investors. For researchers, our results complement an emerging stream of literature that examines the mechanisms through which investor-customer relationships form. For example, advertising geared towards customers can simultaneously stimulate retail investment (e.g., Liaukonyte & Zaldokas, 2022; Madsen & Niessner, 2019). Alternatively, retail investors may be predisposed to purchase products from the companies in which they invest (e.g., Bernard et al., 2018; Keloharju, Knupfer, & Linnainmaa, 2012). We extend this research in two ways. First, whereas prior research has found that investment can affect product consumption (i.e., Bernard et al., 2018), we find that the opposite is also true – product consumption can affect investment decisions. Second, we examine what happens after strong investor-customer relationships form. Not only do investor-customers’ relationships affect how these individuals respond to negative corporate events, but they also affect how these individuals rely on company-issued disclosures.
More broadly, we contribute to prior literature that has examined other sources of investor affinity for a company. For example, investors may have a greater affinity for companies that are geographically close (also known as home or local bias) (e.g., Coval & Moskowitz, 1999; Van Nieuwerburgh & Veldkamp, 2009), for companies that are good Corporate Social Responsibility (CSR) performers (e.g., Elliott, Jackson, Peecher, & White, 2014) or for companies for which they work (e.g., Benartzi & Thaler, 2007). These literatures have documented that these sources of company affinity can cause individuals to be insufficiently sensitive to negative news about the firm. We find consistent results with investor-customers. We take these findings a step further by demonstrating how the effects of investor-customer affinity can result in differential reliance on company-issued disclosures. Our results suggest that future research could examine whether other sources of affinity result in similar behavior.

For firms, our research provides scholarly evidence to support the idea that there are benefits to encouraging current customers to become investors (and vice versa) because customer status alters investor psychology. Anecdotally, firms seem to believe this is the case and expect greater benefits from investors who are also customers. For example, T-Mobile’s “Stock Up” promotion and Domino’s “Piece of the Pie” rewards program both blur the line between customers and investors (Kates, 2019). In a financial setting, we find that indeed investor-customers sell fewer shares in response to a negative event and show that this is due to their shared identity with the company. This result suggests that attracting investor-customers can potentially lead to longer-term investments and decreased stock price volatility. That said, we also find that companies’ attempts to manage the narrative around negative events may not be universally effective. Thus, companies that actively shape their investor base by creating investor-customers may wish to consider whether doing so also necessitates a shift in how they communicate with their retail
investors. For example, as the balance of retail investors includes more investor-customers, company-issued disclosures with financial information may play a less significant role in individuals’ investment-related judgments.

Our results also have implications for investors themselves in that they indicate how greater affiliation with the company can potentially result in different investment judgments. Inasmuch as it can be prudent to “leave emotion out of it” when making investment decisions, our results suggest that it may be more difficult for investor-customers to heed this advice due to their shared identification with the company. We find that this appears to be the case even when investor-customers evaluate a negative financial event. These results open the possibility that high-affinity investor-customers will have a more difficult time determining when they should unwind an investment position or may have a more difficult time deciding how to incorporate company-issued information into their investment judgments. Thus, retail investors may need to consider whether becoming an investor-customer is consistent with their investment goals.

2. Background and hypothesis development

Limited prior work suggests that one’s role as a particular stakeholder in a company may affect their behavior within a different stakeholder group. Specifically, Bernard et al. (2018) show that stock ownership by certain subgroups of investors increases their purchasing behavior for the company’s products. We contribute to this literature by investigating the opposite scenario by asking whether one’s customer standing impacts their behavior as an investor. Below we summarize how one may become both a customer and an investor of the same company as well as lay out our predictions for the potential downstream effects of this dual role.
2.1 Firm efforts to encourage investor-customer relationships

Companies spend a significant amount of money on brand engagement with consumers due to positive outcomes such as increased purchasing behavior, superior competitive advantage, and brand loyalty (e.g., Dwivedi, 2015; Hollebeek, Glynn, & Brodie, 2014; Brodie, Hollebeek, Juric, & Illic, 2011). Brand engagement helps build a relationship and sense of community between the brand and the consumer (e.g., Brodie et al., 2011). In fact, these relationships are often so strong that consumers feel a sense of shared identity with their chosen brands (e.g., Fournier, 1998), which can lead to a long-term commitment to the brand (e.g., Champniss et al., 2015).

Firms increasingly use strategies to convert these same customers into investors. Regardless of the reasons for encouraging investor-customer relationships, investor relations professionals expect this trend to continue as millennials gain wealth and invest more in the stock market (IR Magazine, 2020). In fact, with as much as 30 percent of an average U.S. company’s common stock now held by retail investors, some advisors have begun calling for investor relations officers to coordinate with the company’s chief marketing officer to facilitate investor-customer relationships (NIRI, 2020). Attracting long-term, value-based investors can be beneficial for the firm in that it can reduce managerial myopia, reduce volatility in a firm’s market price, and give management more flexibility to execute their long-term strategy for the firm (Outlaw, 2015; Williamson & Babcock, 2020). Although firms may benefit from developing investor-customer relationships, it is less clear how investors are impacted by the investor-customer relationship, making it important to understand the effects of this trend on investment judgments.

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2 For example, some of the most well-known cruise lines in the world (e.g., Carnival and Royal Caribbean) offer incentives where customers who own more than a certain number of shares of the firm’s stock receive onboard cruise credits of between $50 and $250 on each trip (Mrozinski, 2021). As a result, loyal cruisers (i.e., customers) often purchase shares of the firm’s stock to receive the onboard benefit, and frequently view the investment itself as an afterthought (Crow, 2020). As another example, Hylete, a fitness apparel company, offers lifetime discounts between 30-50% for customers who also invest in the company, depending on the level of their investment. The company aims to create a community of stakeholders they collectively call the Hylete nation.
2.2 *Company-customer shared identity & negative events*

Marketing research indicates that customers can develop a shared identity with the company (e.g., Ashforth & Mael, 1989; Bergami & Bagozzi, 2000; Bhattacharya & Sen, 2003). Research also suggests that individuals perceive shared identities as part of their self-image and how they define themselves (Pratt, 1998). This reference to self can lead to strong reactions to an event that impacts one’s shared identity (Bhattacharya & Sen, 2003; Einwiller, Fedorikhin, Johnson, & Kamins, 2006). In some circumstances, the individual will downplay any negative information (e.g., Ahearne, Bhattacharya, & Gruen, 2005; Evanschitzky, Brock, & Blut, 2011). However, in other circumstances where the individual feels the company betrayed the tenets of the shared identity, they will try to distance themselves from the company, even going so far as to boycott the company’s products or engage in negative word-of-mouth information sharing (Bhattacharjee & Sen, 2003). Thus, investor-customers may either rally around or disassociate from the company in response to negative events.

Because a shared identity develops from a personal and emotional connection with a company and its products (Chaudhuri & Holbrook, 2002), many negative *financial* events, while disappointing, are less likely to threaten investor-customers’ shared identity with a company than negative product events. Chappell (1993) describes the results of a focus group indicating that poor performance of a company product did not diminish a customer-company relationship when customers shared an identity with the company. Without a threat to their identity, customers should act defensively (compared to trying to distance themselves from the company). Bhattacharya and Sen (2003) suggest that this behavior may come in the form of giving the company a benefit of the doubt or forgiving its mistakes as one might do for oneself. Evanschitzky et al. (2011) find support for these predictions in a customer service and customer complaint setting.
Given the above literature, we expect that investor-customers are also likely to perceive the company as part of their self-image. This, in turn, will make it challenging for them to keep their two roles (i.e., investor and customer) separate, potentially impacting their investment judgments. Therefore, we predict that investor-customers’ affinity for the company will act as a buffer in the face of negative financial events, making investor-customers more likely to stand by the company than investors-only. That is, if investor-customers have a shared identity with a company, then we expect them to respond less negatively than investors-only if the company announces a negative financial event. We state this prediction formally in H1:

**H1:** Investor-customers respond less negatively to a negative financial event than do investors-only.

2.3 Negative event mitigation efforts

Once a negative event occurs, companies often make structural changes to mitigate the risk of a future similar event. For example, to mitigate the damage from a restatement, some firms announce that they are taking corrective actions to ensure that there is less risk of restatement in the future (Hennes, Leone, & Miller, 2008; Karpoff, Lee, & Martin, 2008). They may make changes to the board of directors (Farber, 2005), changes to executives’ stock-based compensation (Cheng & Farber, 2008), changes to the CEO or external auditor (Wilson, 2008), or changes to internal control systems (Chakravarthy, deHaan, & Rajgopal, 2014; Gersten, van Riel, & Berens, 2006) in response to a restatement.

In addition to the structural changes, companies frequently craft voluntary disclosures that include favorable information. The favorable information is designed to address the negative event by minimizing its impact (Schlenker 1980). In contrast to the information that independent news outlets provide, these company-issued disclosures can communicate that the risk of harm from the negative event is minimal. For example, in software company Pareteum’s 2019 disclosure,
management announced corrective actions that were directly related to the event while also adding unrelated favorable language to minimize the event by discussing the “positive customer interest” in the company’s products. See below:

*The Company is undertaking a financial review and is taking proactive steps to improve the oversight and controls associated with customer transactions. This restatement does not impact day-to-day operations and the Company continues to be encouraged by the positive customer interest in Pareteum’s global cloud communications platform and its other products and services. Today’s announcement reiterates Pareteum’s commitment to best practices and upholding the highest standards of financial reporting.*

Given that we expect investor-customers’ identity with the firm to act as a buffer in the face of a negative event, we also expect that the presence of favorable information in a company-issued disclosure will be less necessary to assuage investor-customer concerns relative to those of investors-only. That is, investor-customers will give the company the benefit of the doubt regardless of whether it provides favorable information to mitigate the effect of the negative news. In contrast, we predict that investors-only will respond more negatively if the company does not provide favorable information that describes its efforts to mitigate the effects of the negative event. Favorable information will temper that response if investors-only learn that the company is taking actions to prevent future negative financial events. Thus, we predict that investors-only viewing a negative financial event disclosure absent favorable information will have the most negative response to the event compared to investors-only who view a disclosure with favorable information or investor-customers regardless of the disclosure. We state this ordinal interaction formally in H2:

**H2:** Investor-only judgments in the absence of favorable information will have the most unfavorable response to a negative financial event compared to investors-only who view favorable information and investor-customers, regardless of language favorability.

Below, we describe the experiments that we use to test our hypotheses. Before doing so, however, we begin with a company identification pre-test.
3. Company identification pre-test

A critical design element of examining the judgments of investor-customers is ensuring that the individuals in our experiment in fact identify with the company in question. As such, we conduct a company-identification pre-test to ensure that we focus our examination on companies for which there is current company identification.

We recruit 167 participants from Prolific.3 We ask participants if there is a company with which they identify. For the 102 participants who answer in the affirmative, we ask them to name the company and rate the extent to which they identify with it. We adapt our question from an established customer-company identification scale, which has been used extensively in the marketing literature (Ahearne et al., 2005; Bergami & Bagozzi, 2000) and, more recently, in accounting literature (Bauer, 2015). We ask participants to respond on a 7-point scale, with higher numbers indicating greater levels of identification (see Appendix 1).

Of the 102 participants, we eliminate 9 participants that named a brand rather than a company. The remaining 93 participants listed 54 distinct companies that they identify with, and the average identification score was 4.03. The most commonly mentioned company was Nike, with 11 mentions and an average identification score of 5.10, followed by Google, with 10 mentions and a score of 4.00. Apple and LG were tied for third with identification scores of 3.80 and 4.50, respectively. Given these results, we capitalize on the prevalence of Nike (Experiment 1) and Apple (Experiment 2) customers when conducting our experiments.

Below we describe the experiments that we use to test our hypotheses. Experiment 1 examines the effects of investor-customer affinity in the absence of favorable disclosures. Experiment 2

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3 Prolific is a U.K.-based crowd-sourcing platform for online studies that is specifically tailored to academic research. Thus, it has the benefits of providing an accessible and reliable source of high-quality participants, similar to Amazon’s Mechanical Turk (MTurk) (see Krische (2015) for an overview of the benefits of MTurk for accounting research), but with more pre-screening options available to researchers interested in specific populations.
expands on the Experiment 1 results to understand differential reactions to company-issued disclosures that are designed to mitigate the effects of a negative financial event. Experiment 3 demonstrates that our Experiment 2 results are robust to alternative design choices and provides supplemental process evidence.

4. **Experiment 1 – the effect of investor-customer affinity**

4.1 *Design overview and participants*

Our first experiment uses a $1 \times 2$ between-participants design, in which we manipulate investor type: investor-customer and investor. We utilize two companies in our design, Nike and Starbucks.\(^4\) This allows us to randomly assign Nike (Starbucks) customers into both conditions as either Nike (Starbucks) investor-customers or Starbucks (Nike) investors. As such, investor-customer participants are those with a match between the customer company and investor company (i.e., Nike customers who also assume a Nike investment or Starbucks customers who also assume a Starbucks investment). Similarly, this design allows us to define investors-only according to a mismatch between the customer company and investor company (i.e., Nike customers who assume a Starbucks investment or Starbucks customers who assume a Nike investment).

We recruit 288 participants through the Prolific platform. We identify 176 individuals who meet the qualifications for the experiment (described in Section 4.3 below). These individuals have an average age of 35 years and an average work experience of 13 years. They have taken an average of two accounting and finance courses, and 91 percent have purchased stocks and/or mutual funds in the past. Sixty percent of the participants are male. As compensation, participants earn $1 in exchange for completing the task.

\(^4\) We chose Starbucks as the alternative company to capitalize on the likely prominence of Starbucks customers in our sample. Starbucks ranked 4th in our pre-test with an average identification score of 3.7.
4.2 Negative Financial Event

We situate our experiment in an earnings restatement context, as earnings restatements are relatively common (Plumlee & Yohn, 2010) and economically damaging to firms.\textsuperscript{5} Earnings restatements lead to negative market consequences at the announcement date (Burks, 2010; Chen, Cheng, & Lo, 2014; Hribar & Jenkins, 2004; Palmrose, Richardson, & Scholz, 2004; Wilson, 2008), increases in the estimated cost of equity capital (Hribar & Jenkins, 2004; Kravet & Shevlin, 2010), and reductions in the informativeness of subsequent earnings (Chen et al., 2014; Hribar & Jenkins, 2004; Wilson, 2008). Accordingly, a restatement context provides an ideal setting to test our predictions because prior literature in accounting and finance indicates that investors respond negatively to earnings restatements and that investor-customers may be least likely to give firms the benefit of the doubt in this more extreme setting.

4.3 Instructions and procedures

Before beginning the experiment, participants indicate whether they purchase products from any of the following companies: Dunkin’ Donuts, Nike, Barnes & Noble, Under Armour, Amazon, or Starbucks. Participants who indicate that they purchase products from Nike or Starbucks (or both) continue with the experimental task, whereas those who indicate none, or any other company, are directed to an alternate, unrelated task. Those who qualify to participate in the experimental task are randomly assigned to one of our experimental conditions.\textsuperscript{6} In all conditions, participants learn that the company has just announced an earnings restatement.

\textsuperscript{5} Over the past 20 years, there have been more than 18,000 restatements by over 10,000 SEC public registrants (Audit Analytics, 2022).

\textsuperscript{6} Participants who indicate that they are customers of either Nike or Starbucks are randomly assigned to one of the investor-customer or investor-only conditions (i.e., Nike customers are randomly assigned to also hold a Nike investment or to also hold a Starbucks investment; Starbucks customers are randomly assigned to also hold a Starbucks investment or to also hold a Nike investment). Participants who indicate that they are customers of both Nike and Starbucks are randomly assigned to one of the investor-customer cells (i.e. Nike customer with Nike investment or Starbucks customer with Starbucks investment).
We provide participants with access to two articles that describe the restatement. One article is a press release, written by the company; the other is a Bloomberg news article, with each article’s content held constant across conditions. We include both articles to provide a balanced set of information. We tell participants that they are free to review one or both of these articles before providing their thoughts about the effect of the restatement. Panels A and B of Appendix 2 provide an example of the text in each article. The source of the restatement is premature/inaccurate revenue recognition. Both articles indicate that the company’s analysis of the issue is still underway, but both expect that the restatement will likely result in a $0.07 decrease to the previously reported earnings per share (EPS) of $3.17. Thus, we design the restatement to have a sizeable impact on the company’s financial performance. On the next three screens, participants respond to the dependent variable, a series of supplemental questions, and then complete demographic questions.

4.4 Dependent variable

As our primary dependent variable, we ask participants to indicate how they would change their stock investment (if at all) in response to the restatement. Participants respond on a 7-point scale with endpoints of –3 (+3) labeled “significantly decrease” (“significantly increase”) and a midpoint labeled “hold.” On a conceptual level, our dependent variable corresponds to prior archival research that has examined the short-window effects of negative events, such as restatements, on cumulative abnormal returns (e.g., Badertscher et al., 2011).

4.5 Independent variable

We manipulate investor role (investor-customer or investor-only) between participants. We tell those in the investor-only condition that, as an investor, they are concerned with making a profit on their investment. We tell those in the investor-customer condition that, as an investor,
they are concerned with making a profit on their investment and that, as a customer, they are loyal to the company’s products. We tell all participants, regardless of condition, that they believe it is important to stay informed about current events that affect the company.

4.6 Results

4.6.1 Manipulation checks

We ask participants three questions to verify that random assignment is successful at both a conceptual and operational level. At the conceptual level, we use the question described in the pre-test to ask participants about the extent to which they identify with the company. We find that participants in the investor-customer condition express a greater level of identification with the firm than participants in the investor-only condition (2.98 vs. 1.78; t_{158} = 6.25, p < 0.01, one-tailed equivalent). At the operational level, we ask participants to indicate whether they read about Nike or Starbucks and whether they assume the role of an investor or an investor and customer while completing the task. We find that 100% (99%) of participants in the investor-only (investor-customer) condition correctly indicate whether they read about Nike or Starbucks. Eighty-nine percent of participants in each condition correctly indicated whether they assumed the investor-only or the investor-customer role. Thus, we conclude that our assignment of participants to either the investor-customer or investor-only condition is successful.

4.6.2 Hypothesis tests

Table 1, Panel A provides descriptive statistics for participants’ investment judgments broken out by investor role, and Panel B provides descriptive statistics broken out by investor role and company. We find that investor-customers sell fewer shares than investors-only (means of -0.33

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7 Degrees of freedom account for the unequal variances between the two samples.
8 Our results are inferentially identical if we drop participants who failed the manipulation check. We continue to find that investor-customers sell fewer shares than investors-only (means of -0.32 vs. -0.61; F_{1,154} = 3.25, p = 0.07).
vs. -0.66). The one-way analysis of variance (ANOVA) in Table 1, Panel C reveals that this effect is significant ($F_{1,174} = 4.79, p = 0.03$), indicating that investor-customers respond less negatively to an earnings restatement than do investors-only, supporting H1.

To determine whether the effect of investor role depends on the target company (i.e., Nike or Starbucks), we code our data according to investor company (Nike or Starbucks) and customer company (Nike or Starbucks). When investor company and customer company match, participants are investor-customers; when they don’t match, participants are investors-only. Table 1, Panel D presents the results of an ANOVA with investor company and customer company as independent variables and investment judgments as the dependent variable. Figure 1 depicts these results graphically. The interaction between investor company and customer company is significant ($F_{1,172} = 4.73, p = 0.03$), indicating that it is not the company that dictates the investment amount; rather, it is dictated by the match that occurs when participants are investors in and customers of the same company. Examining the simple effects in Table 1, Panel D, we find that the effect of investor role (investor-only vs. investor-customer) is significant when the target company is Nike ($p = 0.05$, one-tailed) and marginally significant when the target company is Starbucks ($p = 0.08$, one-tailed).

Overall, we conclude that the evidence supports H1 and is not dependent on the target company.

Insert Figure 1 and Table 1 about here

4.7 Discussion

Experiment 1 provides evidence that the investor-customer effect is not unique to a specific company in that we observe the effects of this affinity regardless of whether participants are Nike or Starbucks customers. With this result in hand, we now turn to Experiment 2, which examines how investor-customer affiliation affects individuals’ propensity to rely on company-issued financial disclosures, the focus of H2. In so doing, we extend Experiment 1 by turning to MBA
students as another, arguably more sophisticated group of nonprofessional investors than those from Prolific. For this experiment, we shift to another company that our company identification pre-test suggested as having strong company identification, namely Apple. We make this design choice because the more limited access to a sufficient number of MBA students requires that we use a company for which approximately half the participants are customers, and half are not. Given the large number of companies in the sports apparel industry, we could not ensure that this would be the case for Nike. Similarly, the dominance of Starbucks at the university where we collected the data suggested that it would be difficult to obtain a sufficient number of investor-only participants if we selected that company.

5. Experiment 2 – the effect of favorable disclosure

5.1 Design overview and participants

Experiment 2 is also set in the context of an earnings restatement. The experiment uses a 2 × 2 between-participants design, in which we manipulate investor role (investor-only vs. investor-customer) and favorable company-issued information (absent vs. present) in response to the restatement. We recruit 152 participants from graduate-level elective classes at a Top-20 business school to serve as nonprofessional investors (Elliott, Hodge, Kennedy, & Pronk, 2007). We identify 124 individuals who meet the qualifications for the experiment (described in Section 5.2 below). These individuals have an average age of 29 years and an average work experience of four years. They have taken an average of seven accounting and finance courses, and 89 percent have purchased stocks and/or mutual funds in the past. Fifty-six percent of the participants are male. As compensation, participants receive extra credit in exchange for completing the task.
5.2 Instructions and procedures

The instructions and procedures in Experiment 2 are identical to those in Experiment 1, with the following exceptions. Before beginning the experiment, participants indicate which, if any, Apple products they own. Participants who select at least one of the listed Apple products continue with the experimental task, whereas those who indicate that they do not own any Apple products are directed to an alternate, unrelated task.9 Those who qualify to participate in the experiment are randomly assigned to one of our four conditions. In all conditions, participants learn that the company has just announced an earnings restatement. We provide participants with access to two articles that describe the restatement. One article is a press release, written by the company, which includes the favorable information manipulation; the other is a Bloomberg news article with the article’s content held constant across all conditions. Panels C and D of Appendix 2 provide an example of the text in each article.

5.3 Dependent and independent variables

The dependent variable is identical to that from Experiment 1. We manipulate investor role (investor-only vs. investor-customer) between participants. We tell those in the investor-only condition to assume that they hold a sizable investment in the common stock of Samsung and that, as an investor, they are concerned with making a profit on their investment. We tell those in the investor-customer condition to assume that, in addition to owning an iPhone, they hold a sizable investment in the common stock of Apple, that, as an investor, they are concerned with making a profit on their investment, and that, as a customer, they are loyal to the company’s products.

9 We confirm that participants who do not own any Apple products are similar to those who do own at least one Apple product in terms of meaningful demographic variables. Both groups have taken the same number of accounting and finance classes (p = 0.73) and have the same experience with purchasing stocks and/or mutual funds (p = 0.60).
Regardless of condition, we tell all participants that they believe it is important to stay informed about current events that affect the company.

We manipulate favorable information (absent vs. present) between participants. All participants receive a press release issued by the company. The press release describes the restatement. In the favorable information present conditions, the press release also includes the following two paragraphs; the first paragraph provides favorable information directly related to the restatement and the second paragraph provides favorable information about the company in general:

[Apple/Samsung] CEO [Tim Cook/Ki Nam Kim] explains, “We feel it is our responsibility to act quickly to make others aware of the error because we value our loyal community. We are taking this restatement seriously and are completing our review with the assistance of our auditors. I want to emphasize that we are committed to best practices and the highest standards of financial reporting. Our day-to-day operations are unaffected, and [Apple/Samsung] remains a leader in the consumer electronics industry.”

[Tim Cook/Ki Nam Kim] went on to say, “[Apple/Samsung] has long been a globally recognized leader in technology. Today, we set ourselves apart by leading the world in innovation. We have reinvented the consumer experience with our revolutionary devices. Our employees are dedicated to making the best, most inspiring products on earth, and to investing in the next generation of innovation.”

In the favorable information absent conditions, the press release does not include these two paragraphs.

5.4 Results

5.4.1 Manipulation checks

We ask participants two questions to verify that the investor role manipulation was successful at both a conceptual and operational level. At the conceptual level, we use the question described in the pre-test to ask participants about the extent to which they identify with the company. We find that participants in the investor-customer condition express a greater level of identification with the firm than participants in the investor-only condition (3.14 vs. 1.98; t_{122} = 5.36, p < 0.01,
one-tailed equivalent). At the operational level, we ask participants to indicate whether they read about Apple or Samsung while completing the task. We find that 100% (97%) of participants in the investor-only (investor-customer) condition correctly indicate whether they read about Samsung or Apple.  

Thus, we conclude that the investor role manipulation was successful.

To verify that the favorable information manipulation was successful, we conduct an out-of-sample pre-test using 84 participants from Prolific and administer a simplified version of our experiment in which participants receive only the company press release, not the industry news article (see also Asay, Elliott, & Rennekamp, 2017). All 84 participants chose to access the press release. We find that participants rate the press release as more favorable if it included favorable information than if it did not (means of 5.15 vs. 3.88; \( t_{82} = 2.34, p = 0.01 \), one-tailed).  

5.4.2 Hypothesis tests

Table 2, Panel A provides descriptive statistics for participants’ investment judgments. We find that, absent favorable information, investor-customers sell fewer shares in response to the restatement than do investors-only (means of 0.17 vs. -0.53). The simple effect test in Table 2, Panel C reveals that this difference is significant (\( p < 0.01 \), one-tailed). This replicates the results from Experiment 1.

H2 predicts an ordinal interaction between investor role and favorable information such that investors-only who view a disclosure absent favorable information will have the most negative response to an earnings restatement. As we expect one cell to be lower than the other three cells,  

---

10 Our results are inferentially identical if we drop participants who failed the manipulation check. Absent favorable information, we find a significant simple effect of role (\( p < 0.01 \), one-tailed), supporting H1. Further, we find a significant contrast (\( F_{1,118} = 9.07, p < 0.01 \)), supporting H2.

11 Participants in the out-of-sample pre-test also rate the press release as more believable if it was issued by Samsung than by Apple (\( p = 0.02 \), two-tailed). However, they rate it as equally believable regardless of whether it included favorable information or not (\( p = 0.64 \), two-tailed). Given that participants in the out-of-sample pre-test rated the press release as more believable if it was issued by Samsung than by Apple, we included this question in Experiment 2 and find that participants in the actual experiment rated the press release as equally believable regardless of which company issued it (means of 7.24 vs. 7.06; \( t_{122} = 0.50, p = 0.62 \)).
we utilize hypothesized contrast weights of +1, +1, +1, −3. Following Guggenmos, Piercey, & Agoglia, (2018), we confirm a reasonable visual fit in Figure 2, Panel A. Table 2, Panel C reveals a significant contrast (F₁,₁₂₀ = 9.47, p < 0.01) and a non-significant residual (F₁,₁₂₀ = 1.72, p = 0.18). We also find that the contrast explains 73% of the between-cells variance. Examining the simple effects in Table 2, Panel C, we find that the presence of favorable information has a marginally significant effect for investors-only (p = 0.08, one-tailed), but does not have a significant effect for investor-customers (p = 0.85). Overall, we conclude that the evidence supports H₂.¹²

[Insert Figure 2 and Table 2 about here]

5.5 Discussion

In Experiments 1 and 2, we find consistent evidence that investor-customers give the company the benefit of the doubt in the face of a negative financial event, and, in Experiment 2, we find that this is the case regardless of whether the company provides favorable information to mitigate the effect of the negative event. Further, by providing favorable language, this improves investors-only reactions to the negative event. In both experiments, we chose to focus on actual customers of actual firms. While this choice ensures a sufficient level of product-related company identification, it also precludes us from obtaining complete random assignment to condition, thereby introducing potential confounds. For example, it is possible that our target companies differ in the frequency of interaction with their customers, which could impact their level of identification (Bhattacharya and Sen, 2003). To address this issue, we now turn to Experiment 3, which is similar to Experiment 2, but focuses on a hypothetical company and collects additional process data underlying our hypotheses.

¹² In further analysis, we find that investor role does not impact the acquisition of information as there is no difference between investors-only and investor-customers in who clicked on the earnings release (p = 0.43) and time spent on the earnings release (p = 0.19). These findings suggest that investor role changes how these individuals incorporate the information into their reactions.
6. Experiment 3 – supplemental process evidence

6.1 Design overview and participants

Experiment 3 uses a 2 × 2 between-participants design, in which we manipulate investor role (investor-only vs. investor-customer) and favorable company-issued information (absent vs. present). Unlike Experiment 2, we utilize a hypothetical company, Leisure, Inc. We recruit 200 participants from Prolific. Because this experiment uses a weaker investor-role manipulation (i.e., hypothetical relationships rather than real relationships) with an online participant pool, we add an investor-role attention check at the beginning of the study and only retain the 173 individuals who pass this check. These individuals have an average age of 36 years and average work experience of 13.75 years. They have taken an average of three accounting and finance courses, and 92.5 percent have purchased stocks and/or mutual funds in the past. Sixty percent of the participants are male. As compensation, participants receive $1 in exchange for completing the task.

6.2 Instructions and procedures

The instructions and procedures in Experiment 3 are identical to those in Experiment 2, with the following exceptions. First, we utilize a hypothetical company, so we do not measure participants’ purchase behavior prior to beginning the experiment. Second, after the investor role manipulation described in section 6.3, all participants complete the identification scale both before and after reading about the restatement. This allows us to examine how affinity changes in response to the negative event and the company’s efforts to mitigate the effects of that event.

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13 Our results are inferentially similar if we include all participants. Absent favorable information, we find a directionally correct simple effect of role \( (p = 0.14, \text{one-tailed}) \). Further, we find a significant contrast \( (F_{1,198} = 4.74, \ p = 0.03) \), supporting H2.
6.3 Dependent and independent variables

The dependent variable is identical to that from Experiment 2. However, both the investor role manipulation and the favorable information manipulation differ from those in Experiment 2. We tell those in the investor-only conditions to assume they hold a sizable investment in the common stock of Leisure, Inc. and are concerned with making a profit on their investment. We tell those in the investor-customer conditions to assume they own products of Leisure, Inc., as well as a sizable investment in the common stock; they are both concerned with making a profit on their investment and are loyal to the company’s products. To help generate differences in company identification, we provide participants with images of three company products – gloves, a jacket, and a water bottle. Those in the investor-only conditions merely view the products, whereas those in the investor-customer conditions must select the product they are most interested in purchasing. Regardless of condition, we tell all participants that they believe it is important to stay informed about current events that affect the company.

In Experiment 3, we utilize a simpler favorable information manipulation. The simplification involves removing the second paragraph of our favorable information manipulation, as well as removing any reference to loyalty. These changes alleviate any potential concern that support for H2 is driven by information not relevant to the restatement or by a company focus on loyalty. All participants receive a company-issued press release that describes the restatement. In the favorable information present conditions, the press release also includes the following final paragraph:

Leisure, Inc’s CEO Martha Kessloff explains, “We feel it is our responsibility to act quickly to make others aware of the error because we value our community. We are taking this restatement seriously and are completing our review with the assistance of our auditors. I want to emphasize that we are committed to best practices and the highest standards of financial reporting. Our day-to-day operations are unaffected, and Leisure remains a leader in the industry.”
Similar to Experiment 2, in the *favorable information absent* conditions, the press release does not include this final paragraph.

### 6.4 Results

#### 6.4.1 Manipulation check

From Experiments 1 and 2, we know investor-customers should have a greater identity towards the company than investors-only. To assess whether we successfully manipulated investor role with a hypothetical company, we utilize participants’ first assessment of their identity towards Leisure, Inc., which they completed prior to reading about the negative event. We find that participants in the *investor-customer* condition express a greater level of identification with the firm than participants in the *investor-only* condition (3.82 vs. 3.27; $t_{171} = 2.45$, $p < 0.01$, one-tailed equivalent). Thus, we conclude that the manipulation was successful.

#### 6.4.2 Hypothesis tests

Table 3, Panel A provides descriptive statistics for participants’ investment judgments. We find that, absent favorable information, investor-customers sell fewer shares in response to the restatement than do investors-only (means of -0.60 vs. -1.03). The simple effect test in Table 3, Panel C reveals that this difference is significant ($p = 0.02$, one-tailed). This replicates the results from Experiment 1 and Experiment 2. H2 predicts an ordinal interaction between investor role and favorable information such that investors-only who view a disclosure absent favorable information will have the most negative response to an earnings restatement. As with Experiment 2, we expect one cell to be lower than the other three cells and therefore use hypothesized contrast weights of +1, +1, +1, −3. We confirm a reasonable visual fit in Figure 2, Panel B, and Table 3, Panel C reveals a significant contrast ($F_{1,169} = 9.51$, $p < 0.01$) and a non-significant residual ($F_{1,169} = 0.57$, $p = 0.57$). We also find that the contrast explains 91% of the between-cells variance. Examining
the simple effects in Table 3, Panel C, we find that the presence of favorable information has a
significant effect for investors-only (p < 0.01, one-tailed) but does not have a significant effect for
investor-customers (p = 0.29). Overall, we conclude that the evidence supports H2.14

[Insert Table 3 about here]

6.4.3 Process Evidence

In Experiment 3, we measure participants’ identification with the company both before and
after they learn about the restatement. By examining participants’ change in identification, we
can understand how they respond to negative information and company mitigation efforts. Our
theory suggests that absent favorable language, investors-only will distance themselves more
from the company than will investor-customers, as investor-customers give the company the
benefit of the doubt. However, with favorable information, we expect this effect to be smaller.
Table 4, Panel A provides descriptive statistics for the pre- and post-identification judgments.
We compute the change in identification as post-negative event identification minus pre-negative
event identification so that a positive change indicates stronger identification and a negative
change indicates weaker identification. We find that all participants report a decrease in their
identification with the company following the restatement.

To test our theory, we run an ANOVA with participants’ change in identification as the
dependent variable and investor role and favorable language as the independent variables. As
reported in Table 4, Panels B and C, the interaction is significant using both conventional
weights (F_{1,169} = 5.73, p = 0.02) and custom contrast weights (F_{1,169} = 5.66, p = 0.02). In Table 4,
Panel C, we find that absent favorable information, investors-only have a significantly greater
decrease in company identification than investor-customers (p < 0.01, one-tailed); however, with

14 Similar to Experiment 2, investor role does not impact who clicked on the press release (p = 0.53) or time spent on
the press release (p = 0.28).
favorable information present, we do not find a significant difference in identity change between investors-only and investor-customers ($p = 0.41$). This provides support for the argument that investors-only are more likely to distance themselves from a company following a negative event if favorable language is not used, while investor-customers give the company the benefit of the doubt regardless of language utilized in the disclosure.\footnote{Using Hayes’ PROCESS Model 8 with 10,000 bootstrapped confidence intervals (Hayes, 2022), we find that the change in participants’ identification with the company mediates their investment judgments.}

7. Conclusions and implications

Companies recognize the importance of actively managing their investor base, and many companies have become more intentional in their efforts to attract investor-customers (i.e., individuals that both invest in the company’s common stock and buy its products). The conventional thinking is that investor-customers are more likely to be loyal, long-term investors, which can reduce managerial myopia as well as stock price volatility in the market. While cultivating investor-customer relationships may be beneficial for the company, it can potentially be detrimental to the individual. If investor-customers are more likely to give a company the benefit of the doubt in the wake of negative events, then this could adversely affect their investment judgments. The purpose of our research is to examine this possibility and also to examine how status as either an investor-customer or investor-only affects individuals’ propensity to rely on favorable information that appears in company-issued press releases following negative events.

We examine our research questions in an important accounting context – earnings restatements. Restatements are likely to result in negative stock price reactions (e.g., Badertscher, Hribar, & Jenkins, 2011), and companies frequently issue press releases around these events as a way to manage the market’s response to the event. That said, there is variation in the extent to
which these press releases include favorable information as part of the mitigation strategy. Thus, restatements create an ideal setting in which to examine individuals’ investment judgments and propensity to rely on companies’ disclosures around these negative financial events.

Across three experiments, we find that investor-customers identify more strongly with the company and sell fewer shares in response to a negative financial event than do investors-only. These results are consistent with prior marketing research, which has demonstrated that stronger identification with a company can make individuals more resilient to negative information and more forgiving of negative events as a way to protect their self-image. Further, we find that investor-customers differ from investors-only in the extent to which they rely on favorable information in company-issued disclosures. In the context of a negative financial event, investor-customers’ judgments do not differ regardless of whether the company includes favorable information in its press release or not, whereas investors-only respond less negatively to the negative event if the company’s press release includes favorable information. Consistent with investor-customers being more forgiving of the negative event, favorable disclosures do not appear necessary in shaping their less negative view of the company.

Our research contributes to recent literature that has documented how investor-customer relationships form (e.g., Bernard et al., 2018; Madsen & Niessner, 2019). Specifically, we extend this literature by examining how investor-customer relationships affect subsequent investment judgments. Our findings demonstrate that investor-customer relationships have the potential to affect individuals’ long-term investment goals. Further, our results contribute to the literature by demonstrating that, relative to investor-customers, investors-only are more likely to rely on a company’s financial disclosures. We expect that this result will also be informative to other literature streams that have considered the effects of investors’ affinity for a company but have not
considered how this affinity can affect reliance on company-issued disclosures (see, for example, literature on home bias).

From a practical perspective, our results have implications for both companies and their investors. For companies, our results support the anecdotal notion that actively encouraging investor-customer relationships can benefit the company because it increases individuals’ propensity to stick with the company through negative events. That said, our results indicate that companies’ ability to “manage the narrative” around negative events may not always be necessary. That is, investor-customers do not require additional reassurance when the negative event does not threaten their identity. For investors, our results indicate that choosing to invest in companies for which they are also customers can have implications for their investment judgments. Whereas investors-only respond negatively to negative corporate news, investor-customers are more likely to stick by the company due to their shared affiliation with that company and its products.

Our research is subject to limitations that create opportunities for additional research. First, we describe how one of the implications of our study is that attracting investor-customers might reduce stock price volatility in the market by attracting longer-term investors. However, our setting is such that we can only speak to whether attracting investor-customers might reduce downside volatility. Future research might investigate whether attracting investor-customers can also mitigate (or alternatively exacerbate) upside volatility in market prices.

Second, in our manipulation of favorable language, we chose to provide redundant information in order to retain internal validity. However, if companies provide new (rather than redundant) information, this may have a differential effect on judgment. The favorable information provided in our materials also always includes information related to the negative target event and never includes only unrelated favorable information. Thus we cannot identify the effects of providing
only favorable information that is unrelated to the negative target event. Lastly, we chose to manipulate whether or not the favorable information appeared in a company-issued press release and to hold constant the information provided by an independent information source. While this choice is realistic in that positive “spin” is likely to appear in a company disclosure rather than an independent disclosure, it also precludes us from understanding how participants in our experiments were relying on the independent disclosure when making their investment judgments. Future research could more carefully examine these issues.

Finally, we chose to test our predictions in the context of an earnings restatement, a negative financial event, and we did not make it clear whether the underlying cause was an error or a more serious issue. Instead, we could have (1) chosen a different, more common negative financial event, such as a missed earnings forecast, (2) chosen a negative product-related event rather than a financial event, or (3) specified that the negative event casts doubt on the integrity of the company’s management (e.g., fraud or negligence). It is an empirical question as to whether these changes would result in a different reaction from investor-customers. In sum, there are numerous opportunities for additional research related to investor-customer judgments and decision-making.
Appendix 1 – Customer-Company Identification Scale

We sometimes strongly identify with a company. This occurs when we perceive a great amount of overlap between our ideas about who we are as a person and what we stand for (i.e., our self image) and of who this company is and what it stands for (i.e., the company’s image). Imagine that the circle at the left in each image represents your own personal identity and the other circle, at the right, represents Apple’s identity. Please indicate which set of circles best describes the level of overlap between these two identities. Select the number of the corresponding picture.

Note: This appendix provides the scale that we used to capture participants’ level of identification with the company. We provide the wording for the investor-customer condition in which participants indicate their level of identification with Apple.

Electronic copy available at: https://ssrn.com/abstract=4405242
Appendix 2 – Excerpts from Experimental Materials

Panel A – Experiment 1, Company-issued press release

Starbucks Newsroom

PRESS RELEASE
June 20, 2022

Starbucks to Restate Financial Statements

Seattle, Washington — Starbucks today announced that it plans to restate its previously issued financial statements as of, and for the full year ended, September 28, 2021. Investors should no longer rely upon the Company’s previously released financial statements for the time period cited above. Similarly, related press releases, earnings releases, and investor communications describing the Company’s financial statements for this period should no longer be relied upon.

The decision to restate these financial statements is based on the Company’s conclusion that certain revenues were recognized in error during 2021 and should not have been recorded during that period. For certain transactions, the Company either prematurely or inaccurately recognized revenue. At the present time, the corrections are expected to impact Net Sales, Operating Income, Net Income, and Accounts Receivable. While the Company’s analysis is still underway, the Company currently estimates that earnings per share (EPS) for the full year 2021 will be approximately $0.07 lower than previously reported.

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Bloomberg

Starbucks Announces Accounting Restatements

By Mark Gurman
June 20, 2022, 12:03 PM CDT

Starbucks on Thursday announced a restatement for the fiscal year ending September 28, 2021.

The Seattle, Washington-based company said in a statement that it has determined that certain revenues for 2021 were overstated in error. The result of the restatement is likely to be a $0.07 decrease in the previously reported earnings per share (EPS) of $3.17. The company said their analysis of the issue is still underway.

A company spokesperson stated, “Starbucks has been working closely with their auditors and advisors to address all aspects of the accounting restatement. We are taking action to improve our policies and procedures.”

The restatement affects the company’s year over year trend for both net sales and net income. Although both figures are still higher than those reported in fiscal 2020, the restatement certainly erodes some of that increase. Over the past several years, Starbucks has slowed in terms of its growth in the marketplace.

To contact the reporter on this story: Mark Gurman in San Francisco at gurman1@bloomberg.net

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Apple Newsroom

PRESS RELEASE
September 20, 2020

Apple to Restate Financial Statements

Cupertino, California—Apple today announced that it plans to restate its previously issued financial statements as of and for the full year ended, September 28, 2019. Investors should no longer rely upon the Company’s previously released financial statements for the time period cited above. Similarly, related press releases, earnings releases, and investor communications describing the Company’s financial statements for this period should no longer be relied upon.

The decision to restate these financial statements is based on the Company’s conclusion that certain revenues were recognized in error during 2019 and should have not been recorded during that period. For certain transactions, the Company either prematurely or inaccurately recognized revenue. At the present time, the corrections are expected to impact Net Sales, Operating Income, Net Income, and Accounts Receivable. While the Company’s analysis is still underway, the Company currently estimates that earnings per share (EPS) for the full year 2019 will be approximately $0.07 lower than the previously reported EPS of $3.17.

Apple CEO Tim Cook explains, “We feel it is our responsibility to act quickly to make others aware of the error because we value our loyal community. We are taking this restatement seriously and are completing our review with the assistance of our auditors. I want to emphasize that we are committed to best practices and the highest standards of financial reporting. Our day-to-day operations are unaffected, and Apple remains a leader in the consumer electronics industry.”

Tim Cook went on to say, “Apple has long been a globally recognized leader in technology. Today, we set ourselves apart by leading the world in innovation. We have reinvented the consumer experience with our revolutionary devices. Our employees are dedicated to making the best, most inspiring products on earth, and to investing in the next generation of innovation.”

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Electronic copy available at: https://ssrn.com/abstract=4405242
Panel D – Experiment 2, Industry-issued news article

**Bloomberg Technology**

By Mark Gurman  
September 20, 2020, 12:03 PM CDT

**Apple Inc. on Thursday announced a restatement for the fiscal year ending September 28, 2019**

The Cupertino, California - based technology giant said in a statement that it has determined that certain revenues for 2019 were overstated in error. The result of the restatement is likely to be a $0.07 decrease in the previously reported earnings per share (EPS) of $3.17. The company said their analysis of the issue is still underway.

A company spokesperson stated, “Apple has been working closely with their auditors and advisors to address all aspects of the accounting restatement. We are taking action to improve our policies and procedures.”

The restatement affects the company’s year over year trend for both net sales and net income. Although both figures are still higher than those reported in fiscal 2018, the restatement certainly erodes some of that increase. Over the past several years, Apple has slowed in terms of its growth in the marketplace.

To contact the reporter on this story: Mark Gurman in San Francisco at gurman1@bloomberg.net

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**Note:** This appendix provides the text of the articles that we provided to participants in Experiments 1 and 2. Panels A and C provide examples of the company-issued press releases. In Experiment 1, we hold the content of this press release constant across conditions; in Experiment 2, it includes the favorable information manipulation. Panels B and D provide examples of the industry-issued news articles, the content of which we held constant across conditions in both experiments.
References


Figure 1 – Experiment 1 Observed Results

Note: This figure depicts the results of participants’ stock investment judgments in response to an earnings restatement announcement. Participants provide their judgments on a 7-point scale with endpoints of – 3 (+ 3) labeled as “significantly decrease” (“significantly increase”) and a midpoint labeled as “hold.” All participants currently purchase products from either Nike or Starbucks. Participants are assigned to either the investor-customer or investor-only condition by creating either a match or a mismatch between the company that participants purchase from and the company that they are invested in. That is, we randomly assign participants who purchase products from Nike to hold either an investment in Starbucks (investor-only) or an investment in Nike (investor-customer). Similarly, we randomly assign participants who purchase products from Starbucks to hold either an investment in Nike (investor-only) or an investment in Starbucks (investor-customer).
Figure 2 – Experiments 2 and 3 Observed Results

Panel A: Experiment 2 stock investment judgments

Panel B: Experiment 3 stock investment judgments

Note: This figure depicts the observed results in Experiments 2 and 3 for participants’ stock investment judgments in response to an earnings restatement announcement. Participants provide their judgments on a 7-point scale with endpoints of – 3 (+ 3) labeled as “significantly decrease” (“significantly increase”) and a midpoint labeled as “hold.” In Experiment 2, all participants currently own an iPhone. We manipulate investor role between-participants with those in the investor-only (investor-customer) condition assuming that they have an investment in Samsung (Apple). In Experiment 3, we manipulate investor role between-participants with those in the investor-only (investor-customer) condition assuming that they have an investment in (have an investment in and are customers of) a hypothetical company. We manipulate favorable information between-participants with those in the present (absent) conditions receiving (not receiving) favorably-worded information at the end of a company-issued press release.
Table 1 – Experiment 1 Results for Stock Investment Judgment

Panel A – Descriptive statistics: Mean [median] (standard deviation)

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<tr>
<th>Investor Role</th>
<th>Investor-only</th>
<th>Investor-customer</th>
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</thead>
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<td>Investor-only</td>
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<td>-0.33</td>
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<td></td>
<td>[-1.00]</td>
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<td></td>
<td>(1.04)</td>
<td>(0.95)</td>
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<td>n = 87</td>
<td>n = 89</td>
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Panel B – Descriptive statistics: Mean [median] (standard deviation)

<table>
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<tr>
<th>Customer Company</th>
<th>Investor Company</th>
<th>Nike investor</th>
<th>Starbucks investor</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean [median] (standard deviation)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Investor only</td>
<td>Customer only</td>
</tr>
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Panel C – One-way analysis of variance (ANOVA) results

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<th>F-ratio</th>
<th>p-value</th>
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</thead>
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<td>Role</td>
<td>1</td>
<td>4.77</td>
<td>4.79</td>
<td>0.03</td>
</tr>
<tr>
<td>Error</td>
<td>174</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel D – Two-way analysis of variance (ANOVA) results

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean-Square</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer company</td>
<td>1</td>
<td>0.01</td>
<td>0.01</td>
<td>0.94</td>
</tr>
<tr>
<td>Investor company</td>
<td>1</td>
<td>0.01</td>
<td>0.01</td>
<td>0.91</td>
</tr>
<tr>
<td>Customer*Investor</td>
<td>1</td>
<td>4.76</td>
<td>4.73</td>
<td>0.03</td>
</tr>
<tr>
<td>Error</td>
<td>172</td>
<td>1.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Follow-up simple effect tests:
- Effect of investor company given Nike customer: 0.05†
- Effect of investor company given Starbucks customer: 0.08†

Note: This table provides Experiment 1 results related to participants’ stock investment judgments in response to an earnings restatement announcement. Participants provide their judgments on a 7-point scale with endpoints of –3 (+3) labeled as “significantly decrease” (“significantly increase”) and a midpoint labeled as “hold.” All participants.
currently purchase products from either Nike or Starbucks. We assign participants to either the role of investor-customer or investor-only by randomly assigning participants who purchase products from Nike to hold either an investment in Starbucks (investor-only) or an investment in Nike (investor-customer). Similarly, we randomly assign participants who purchase products from Starbucks to hold either an investment in Nike (investor-only) or an investment in Starbucks (investor-customer). Panels A and B provide descriptive statistics, and grey shading in Panel B highlights the investor-customer conditions in which there is a match between the company that participants purchase from and invest in. Panel C includes a one-way ANOVA that collapses investor-role across companies. Panel D includes a two-way ANOVA that separates investor company and customer company along with relevant simple effects.
† Directional prediction, p-value is based on a one-tailed test.
Table 2 – Experiment 2 Results for Stock Investment Judgment

Panel A – Descriptive statistics: Mean [median] (standard deviation)

<table>
<thead>
<tr>
<th>Favorable Information</th>
<th>Investor Role</th>
<th>Row Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Investor-only</td>
<td>Investor-customer</td>
</tr>
<tr>
<td>Absent</td>
<td>-0.53 [0.00]</td>
<td>0.17 [0.00]</td>
</tr>
<tr>
<td></td>
<td>(1.08)</td>
<td>(1.01)</td>
</tr>
<tr>
<td></td>
<td>n = 32</td>
<td>n = 35</td>
</tr>
<tr>
<td>Present</td>
<td>-0.19 [0.00]</td>
<td>0.13 [0.00]</td>
</tr>
<tr>
<td></td>
<td>(0.69)</td>
<td>(0.67)</td>
</tr>
<tr>
<td></td>
<td>n = 26</td>
<td>n = 31</td>
</tr>
<tr>
<td>Column Means</td>
<td>-0.38 [0.00]</td>
<td>0.15 [0.00]</td>
</tr>
<tr>
<td></td>
<td>(0.93)</td>
<td>(0.86)</td>
</tr>
<tr>
<td></td>
<td>n = 58</td>
<td>n = 66</td>
</tr>
</tbody>
</table>

Panel B – Two-way analysis of variance (ANOVA) results

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean-Square</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role</td>
<td>1</td>
<td>8.03</td>
<td>9.99</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Information</td>
<td>1</td>
<td>0.67</td>
<td>0.84</td>
<td>0.36</td>
</tr>
<tr>
<td>Role × Information</td>
<td>1</td>
<td>1.11</td>
<td>1.39</td>
<td>0.24</td>
</tr>
<tr>
<td>Error</td>
<td>120</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel C – Planned contrast and follow-up simple effect tests

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall contrast:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrast Weights (-3, +1, +1, +1)* (H2)</td>
<td>1</td>
<td>9.47</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Residual</td>
<td>2</td>
<td>1.72</td>
<td>0.18</td>
</tr>
<tr>
<td>Follow-up simple effect tests:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect of information given investor-only</td>
<td>1</td>
<td>0.08†</td>
<td></td>
</tr>
<tr>
<td>Effect of information given investor-customer</td>
<td>1</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
<td>Effect of role given information absent (H1)</td>
<td>1</td>
<td>&lt; 0.01†</td>
<td></td>
</tr>
<tr>
<td>Effect of role given information present</td>
<td>1</td>
<td>0.18</td>
<td></td>
</tr>
</tbody>
</table>

Note: This table provides Experiment 2 results related to participants’ stock investment judgments in response to an earnings restatement announcement. Participants provide their judgments on a 7-point scale with endpoints of –3 (+3) labeled as “significantly decrease” (“significantly increase”) and a midpoint labeled as “hold.” All participants currently own an iPhone. We manipulate investor role between-participants with participants in the investor-only (investor-customer) condition assuming that they have an investment in Samsung (Apple). We also manipulate
favorable information between-participants with participants in the present (absent) conditions receiving (not receiving) favorably worded paragraphs at the end of a company-issued press release. Panel A provides the descriptive statistics, Panel B includes the ANOVA table, and Panel C includes the planned contrast and simple effects tests.

* The contrast assigns a weight of -3 to the Investor-only, absent favorable information condition and a weight of +1 to each of the remaining three conditions.

† Directional prediction, p-value is based on a one-tailed test.
Table 3 – Experiment 3 Results for Stock Investment Judgment

Panel A – Descriptive statistics: Mean [median] (standard deviation)

<table>
<thead>
<tr>
<th>Favorable Information</th>
<th>Investor Role</th>
<th>Row Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Investor-only</td>
<td>Investor-customer</td>
</tr>
<tr>
<td>Absent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-1.03</td>
<td>-0.60</td>
<td>-0.78</td>
</tr>
<tr>
<td>[0.90]</td>
<td>(0.99)</td>
<td>(0.97)</td>
</tr>
<tr>
<td>Present</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.47</td>
<td>-0.40</td>
<td>-0.43</td>
</tr>
<tr>
<td>[0.00]</td>
<td>(0.83)</td>
<td>(0.91)</td>
</tr>
<tr>
<td>Column Means</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.75</td>
<td>-0.50</td>
</tr>
<tr>
<td></td>
<td>[1.00]</td>
<td>[0.00]</td>
</tr>
<tr>
<td></td>
<td>(1.00)</td>
<td>(0.92)</td>
</tr>
</tbody>
</table>

Panel B – Two-way analysis of variance (ANOVA) results

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean-Square</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role</td>
<td>1</td>
<td>2.63</td>
<td>3.00</td>
<td>0.09</td>
</tr>
<tr>
<td>Information</td>
<td>1</td>
<td>6.01</td>
<td>6.87</td>
<td>0.01</td>
</tr>
<tr>
<td>Role × Information</td>
<td>1</td>
<td>1.33</td>
<td>1.52</td>
<td>0.22</td>
</tr>
<tr>
<td>Error</td>
<td>169</td>
<td>0.88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel C – Planned contrast and follow-up simple effect tests

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall contrast:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrast Weights (-3, +1, +1, +1)† (H2)</td>
<td>1</td>
<td>9.51</td>
<td>&lt; 0.01†</td>
</tr>
<tr>
<td>Residual</td>
<td>2</td>
<td>0.57</td>
<td>0.57</td>
</tr>
<tr>
<td>Follow-up simple effect tests:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect of information given investor-only</td>
<td>1</td>
<td>&lt; 0.01†</td>
<td></td>
</tr>
<tr>
<td>Effect of information given investor-customer</td>
<td>1</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>Effect of role given information absent (H1)</td>
<td>1</td>
<td>0.02†</td>
<td></td>
</tr>
<tr>
<td>Effect of role given information present</td>
<td>1</td>
<td>0.72</td>
<td></td>
</tr>
</tbody>
</table>

Note: This table provides Experiment 3 results related to participants’ stock investment judgments in response to an earnings restatement announcement. Participants provide their judgments on a 7-point scale with endpoints of –3 (+3) labeled as “significantly decrease” (“significantly increase”) and a midpoint labeled as “hold.” We manipulate investor role between-participants with those in the investor-only (investor-customer) condition assuming that they have an investment in (have an investment in and are customers of) a hypothetical company. We manipulate
favorable information between-participants with participants in the present (absent) conditions receiving (not receiving) a favorably worded paragraph at the end of a company-issued press release. Panel A provides the descriptive statistics, Panel B includes the ANOVA table, and Panel C includes the planned contrast and simple effects tests.
* The contrast assigns a weight of -3 to the Investor-only, absent favorable information condition and a weight of +1 to each of the remaining three conditions.
† Directional prediction, p-value is based on a one-tailed test.
### Table 4 – Experiment 3 Results for Change in Company Identification

#### Panel A – Descriptive statistics: Mean [median] (standard deviation)

<table>
<thead>
<tr>
<th></th>
<th>Investor-only</th>
<th></th>
<th>Investor-customer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Favorable Information</td>
<td></td>
<td>Favorable Information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Absent (n = 37)</td>
<td>Present (n = 36)</td>
<td>Absent (n = 50)</td>
<td>Present (n = 50)</td>
</tr>
<tr>
<td>Pre-Identification</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favorable Information Absent</td>
<td>3.43 [3.00] (1.39)</td>
<td>3.11 [3.00] (1.17)</td>
<td>3.86 [4.00] (1.53)</td>
<td>3.78 [4.00] (1.59)</td>
</tr>
<tr>
<td>Favorable Information Present</td>
<td>2.46 [2.00] (1.04)</td>
<td>2.61 [2.50] (1.15)</td>
<td>3.44 [3.00] (1.46)</td>
<td>3.10 [3.00] (1.31)</td>
</tr>
<tr>
<td>Change</td>
<td>-0.97 [-1.00] (1.12)</td>
<td>-0.50 [0.00] (0.91)</td>
<td>-0.42 [0.00] (0.93)</td>
<td>-0.68 [0.00] (1.02)</td>
</tr>
</tbody>
</table>

#### Panel B – Two-way analysis of variance (ANOVA) results

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean-Square</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role</td>
<td>1</td>
<td>1.47</td>
<td>1.48</td>
<td>0.22</td>
</tr>
<tr>
<td>Information</td>
<td>1</td>
<td>0.48</td>
<td>0.48</td>
<td>0.49</td>
</tr>
<tr>
<td>Role × Information</td>
<td>1</td>
<td>5.67</td>
<td>5.73</td>
<td>0.02</td>
</tr>
<tr>
<td>Error</td>
<td>169</td>
<td>0.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Panel C – Planned contrast and follow-up simple effect tests

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall contrast:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrast Weights (-3, +1, +1, +1)*</td>
<td>1</td>
<td>5.66</td>
<td>0.02</td>
</tr>
<tr>
<td>Residual</td>
<td>2</td>
<td>0.86</td>
<td>0.43</td>
</tr>
<tr>
<td>Follow-up simple effect tests:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect of information given investor-only</td>
<td>1</td>
<td>0.02†</td>
<td></td>
</tr>
<tr>
<td>Effect of information given investor-customer</td>
<td>1</td>
<td>0.19</td>
<td></td>
</tr>
<tr>
<td>Effect of role given information absent</td>
<td>1</td>
<td>&lt; 0.01†</td>
<td></td>
</tr>
<tr>
<td>Effect of role given information present</td>
<td>1</td>
<td>0.41</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** This table provides Experiment 3 results related to participants’ company identification judgments in response to an earnings restatement announcement. Participants provide their judgments on the 7-point scale shown in Appendix 1. We elicit the pre-judgment after the investor role manipulation but before participants receive information about the restatement. We elicit the post-judgment after participants receive information about the restatement. We manipulate investor role between-participants with those in the investor-only (investor-customer) condition assuming that they have an investment in (have an investment in and are customers of) a hypothetical...
company. We manipulate favorable information between-participants with participants in the present (absent) conditions receiving (not receiving) a favorably worded paragraph at the end of a company-issued press release. Panel A provides the descriptive statistics, Panel B includes the ANOVA table, and Panel C includes the planned contrast and simple effects tests.

* The contrast assigns a weight of -3 to the Investor-only, absent favorable information condition and a weight of +1 to each of the remaining three conditions.

† Directional prediction, $p$-value is based on a one-tailed test.