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Audit Partner Disclosure: An Experimental Exploration of Accounting Information Contagion

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ABSTRACT: We explore potential effects of a new Public Accounting Oversight Board (PCAOB) rule that requires disclosure of the external audit partner's identity. By manipulating the presence or absence of audit partner disclosure (APD), we examine how investors might react to APD and the mechanism behind such reaction. We find that prospective investors are less likely to invest in a peer firm linked to a restating firm via APD than when the link is only through an audit firm and industry. This effect is mediated by investors' restatement likelihood assessments. Our study makes several contributions. First, we add empirical evidence to the emerging debate on the impact of APD to U.S. markets. Second, we experimentally demonstrate investor information contagion and provide support for one mechanism (speculated by archival-based literature) through which it works. Finally, we provide evidence that investors attribute more blame to partners for a negative outcome due to APD.

Keywords: audit partner disclosure; contagion; information transfer.

JEL Classifications: M42; M48.

INTRODUCTION

In May 2015, the Securities and Exchange Commission (SEC) approved Public Company Accounting Oversight Board (PCAOB 2015, 2016) rules requiring disclosure of the identity of the engagement partner(s) participating in public company audits (hereafter, "partner disclosure" or "APD"). The rule went into effect for audits issued on or after January 31, 2017. In this study, we explore the potential impact of APD on investors' decision making. Specifically, we explore whether a new, regulatory-induced medium for potential investor contagion (i.e., APD) will lead to additional accounting information transfer (i.e., "contagion effects") or whether any investor reaction related to the audit will be subsumed through firm-level effects. A contagion effect refers to a phenomenon where a negative event that occurs at one reporting entity affects investors' assessments of financial information provided by a related ("linked" or "peer") reporting entity (Gleason, Jenkins, and Johnson 2008). More specifically, previous archival-based studies have demonstrated that negative information from one reporting entity may affect the share price of other, closely linked reporting entities (Huang and Li 2009; Gleason et al. 2008). Thus, partner disclosure also provides an appropriate setting within which to provide experimental evidence to complement and expand upon existing archival research that documents accounting information contagion at the audit firm level.

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Investors and investor groups have been supportive of APD from the start and welcomed the opportunity to investigate the experience and "track record" of individual audit partners (PCAOB 2011). Public accounting firms have expressed concern that third parties will collect partner information to make ill-informed inferences about audit quality (PCAOB 2011).[1] That is, both groups agree that APD is likely to provide a new, stronger, and more salient audit-related avenue (i.e., the "track record" of a specific audit partner) through which accounting information transfer (i.e., ill-informed inferences about audit quality) may arise. We expect decision makers to respond more strongly to negative information from a peer firm linked to the related reporting entity via an individual than via a group, as research finds that individuals' judgments related to people are more extreme, more hastily and confidently formed, and more easily recalled than those made of groups (Susskind, Maurer, Thakkar, Hamilton, and Sherman 1999). While contagion effects have been found to occur at the firm level (Huang and Li 2009; Gleason et al. 2008), the extent to which APD will result in partner-specific accounting information transfer/contagion is yet to be determined. As such, we examine whether prospective investors will make inferences about a partner (based on the specifics of one engagement) that may "transfer" with the partner (above and beyond any firm- or office-specific transfer) to other engagements in a way that affects investor decision making. Further, we use the advantage of an experiment to more precisely explore whether accounting information contagion arises as a result of altered investor perceptions about the content and credibility of the financial statements.

We use a 1×2 between-participants design where we manipulate whether a firm, which has just experienced a restatement (i.e., the "contaminated" firm), is linked to an optimum investment choice via the same industry and audit firm only (*FIRM* condition) or whether it is linked via the same industry, audit firm, and audit partner (*APD* condition). Experienced investor participants (recruited primarily through Qualtrics) are asked to provide investment preferences based on summary financial data from five potential investment choices, with one organization having markedly better performance on all of the data dimensions provided. Investors' single investment choice serves as our primary dependent variable. We predict and find that investors are less likely to invest in the highest-performing firm when it is linked to a restating firm via an audit *partner* (*APD*) than when it is linked only by an audit *firm* (*FIRM*). It is important to note that, because the highest-performing and restating firms are linked via shared industry, audit firm, and local office in all conditions, the effect we observe is specific to APD and is incremental to any firm-based (or other) contagion effects.

We further explore whether the contagion effect results from its impact on investors' perceptions of the content and credibility of financial statements. Specifically, we examine whether our investor participants are more likely to anticipate a future accounting restatement at a firm linked to a restating firm via APD than at a firm linked via audit firm and industry only. We predict and find that investors in the *APD* condition will assess the optimum firm as being more likely to experience a restatement than investors in the *FIRM* condition. We hypothesize that accounting information transfer will be mediated by the extent to which investors anticipate a future accounting restatement at the optimum firm. Our results show that investors' restatement assessments mediate the contagion effect exhibited in our study and suggest accounting information transfer occurs as a result of its effect on the perceived credibility of the financial statements of linked/peer firms, as speculated by archival-based studies.

Supplementary analyses suggest the effect of APD on investors' investment choice is robust to controlling for their level of familiarity with the audit process and with the financial information presented in the study. Also, participants were marginally more likely to attribute blame for the restatement to the audit partner when the partners' name was known (*APD* condition) than when it was not known (*FIRM* condition). This may have some impact on important issues facing audit firms, such as client retention and legal liability. There were no significant differences on the extent to which *APD* and *FIRM* participants attributed such blame to the audit firm or to the company itself.

Our findings suggest that APD serves as a conduit for accounting information contagion. Because our experimental design allows us to control for local office and firm effects within our experiment, we demonstrate that APD could lead to contagion effects more specific than those previously observed in archival literature (e.g., Gleason et al. 2008). Most interestingly, we are able to shed some light on the way in which the contagion effect operates. While our mediation results are not able to rule out other mechanisms through which the effect operates beyond the scope of our study (e.g., through information about deteriorating economic prospects for the industry, as conjectured by Schaub [2006] and Gleason et al. [2008]), we do show that investor concerns about the content and credibility of financial statements issued by peer firms are an important driver of accounting information contagion.

[1] In fact, by March 2017, the PCAOB itself had already created a user-friendly "AuditorSearch" interface, which is a public database of engagement partners and audit firms participating in audits of U.S. public companies, so that users can easily identify all of the clients audited by a particular audit partner (see https://pcaobus.org/Pages/AuditorSearch.aspx).

The remainder of our paper is organized as follows. We review the relevant literature and motivate our hypotheses in the second section. We describe the experimental methods and results in the third and fourth sections, respectively, and we offer conclusions and suggestions for future research in the fifth section.

BACKGROUND AND THEORY

APD in Other Jurisdictions

Three recent studies have been conducted in reporting regimes where partner disclosure is currently mandated—Sweden, China, the U.K., and The Netherlands. Knechel, Vanstraelen, and Zerni (2015) analyze Big 4 audited Swedish private companies and conclude that aggressive/conservative reporting is a systematic partner attribute and that the market imposes a cost on small, private clients audited by audit partners who exhibit aggressive reporting. Gul, Wu, and Yang (2013) report similar findings related to measures of audit quality being associated with specific audit partners in China; they also find that education or experience with a Western-based accounting system is associated with more conservatism. Carcello and Li (2013) conclude that the impact of recent U.K. regulation requiring partner disclosure has resulted in increases in audit quality and audit fees.

These studies suggest that APD may be a potentially useful piece of information for investors. However, the reporting, regulatory, and legal environment within these countries is quite different from that of the U.S. For example, as noted by Kinney (2015), Knechel et al. (2015) examine statutory audits of small private companies in which each partner performs an average of approximately 80 audits per year (in comparison to the partner of a publicly listed company who may sign as few as one audit report per year). With respect to the litigation environment, Seetharaman, Gul, and Lynn (2002) capture increased litigation exposure in the United States as compared to other markets by finding that U.K. auditors charge higher fees for their services when their clients access U.S., but not non-U.S., capital markets. With respect to the regulatory environment, U.S. companies are extensively overseen by regulatory bodies such as the SEC and PCAOB and have a more rigid rules-based approach to accounting standards than the principles-based approach found in countries that report according to International Financial Reporting Standards (Cohen, Krishnamoorthy, Peytcheva, and Wright 2013). In addition, as evidenced by Gul et al.'s (2013) finding related to conservative reporting exhibited by Western-based audit partners, there may be less variability among partners within the U.S. We also note that Carcello and Li (2013) document an increase in cost, in addition to the increase in benefit they observe. Finally, Blay, Notbohm, Schelleman, and Valencia (2014) document no substantial improvement to audit quality, relative to prior years and to a control sample of non-affected U.K. firms, for The Netherlands firms, after adopting a partner-signature requirement.

Given mixed archival findings and concerns regarding the information content of APD and how U.S. investors and other interested parties might react to the disclosure, there is still much to be explored surrounding the potential impact of APD. In this paper, we compare investors' decisions in the presence and absence of APD. Although the design of our experiment does not allow us to make a value judgment regarding the *quality* of our participants' responses across reporting regimes, it does allow us to explore reasons behind their reactions. This should help to shed additional light on the potential costs and benefits of APD.

Accounting Information Transfer/Contagion Effects

Existing research defines accounting information transfer/contagion as the phenomenon in which negative information about one reporting entity leads investors to alter their assessments about a different reporting entity with similar characteristics or qualities (Schaub 2006; Gleason et al. 2008).[2] Based on our review and understanding of the contagion effect literature, for contagion to occur, two requirements must be met. First, the two entities must share a similar characteristic; in our study, the shared characteristic is the industry and audit firm in both conditions and the audit partner in our *APD* condition. Second, one of the entities must experience a significantly negative event that could alter investors' assessments, which, in our study, is realized through a restatement of a nature that would be expected to have negative market effects.

We consider a restatement to be an appropriate, sufficiently negative event because prior research suggests restatements result in losses in market value (Palmrose, Richardson, and Scholz 2004), increases in the cost of capital (Kravet and Shevlin 2010), and reductions in earnings forecasts (Hribar and Jenkins 2004). Further, while the effect is short-term in nature (lasting for approximately four quarters), Wilson (2008) finds that restatements result in the restating organization losing market credibility, which manifests as a reduction in a loss of earnings information content. Accordingly, the possibility exists that investors could alter their perceptions of a non-restating entity simply because it shares auditor characteristics with a restating

[2] The existence of accounting information transfer does not necessarily represent a cognitive bias as, some argue, the contagious information may have diagnostic value. For example, Schaub (2006) argues that going concern opinion announcements result in negative stock price adjustments to firms in the same industry, and concludes that market participants interpret the information provided by the audit opinion as an industry-wide problem.

entity, an effect that is substantiated by existing contagion research. For example, Huang and Li (2009) find that companies audited by Arthur Andersen's Houston office experienced negative stock price effects following news reports of workpaper shredding, and Weber, Willenborg, and Zhang (2008) find that KPMG Germany's audit clients experienced negative market effects after a highly publicized accounting scandal.

Moreover, research suggests that as the specificity of the link between organizations increases, so will the likelihood of contagion. For example, Huang and Li (2009) find that reactions to the Arthur Andersen scandal were more pronounced for other Andersen clients in the same industry and/or the same geographical location as Enron Corporation. Gleason et al. (2008) find that accounting restatements induce a share price decline for non-restating "peer" firms linked to a restating firm via the same industry. Further, Gleason et al. (2008) find that shared audit firms can induce accounting information contagion in that they find a larger effect on stock price when peer firms are linked by way of the same external audit firm than when they are not so specifically linked. They speculate that restatements may affect peer firms because they provide information about deteriorating economic prospects for the industry (as suggested by Schaub [2006]), or that they function as a catalyst for altering investors' perceptions about the content and credibility of the financial statements. Gleason et al. (2008) note, however, that not all restatements induce contagion, and, as discussed in more detail below, there is no evidence that investors successfully anticipate subsequent restatements by these firms.

Finally, there is also evidence to suggest that accounting information transfer may manifest when firms are linked through a single person. For example, there is evidence that investor reaction to information is often determined by how salient and strongly emphasized the information is, rather than its statistical validity (Bloomfield 2012; Hirshleifer and Teoh 2003). We expect the identity of the audit partner to be an inherently salient disclosure due to its person-specific nature. Social psychology research finds that when forming impressions, perceivers make more extreme trait judgments, make judgments more quickly and with greater confidence, and recall more information when forming an impression of an individual than when forming an impression of a group (Susskind et al. 1999). In addition, persons are seen as having more stable properties that cause outcomes, while groups are not (Menon, Morris, Chiu, and Hong 1999). Further, impression formation models (Wyer and Srull 1986; Srull and Wyer 1989) suggest that data are often encoded as traits, and affective reactions to such data will provide the most retrievable memory trace to which decision makers respond (Kida, Smith, and Maletta 1998). A restatement that is more likely to result in the negative outcomes discussed above (e.g., losses in market value, reductions in earnings forecasts) is likely to induce such negative affective reactions, and decision makers are likely to react more strongly when the reactions are associated with an individual than when they are associated with a group.

In sum, we expect audit partner identification to provide a more salient and specific avenue through which investors make stronger and more memorable inferences about related reporting firms than they would make without the disclosure. Thus, we expect that peer entities will experience partner-based "contagion" or "spillover" effects based on information related to a contaminated firm (above and beyond any inferences made due to shared industry and/or audit firm). We formally state our hypothesis as follows:

H1: Audit partner disclosure will result in greater investment contagion relative to disclosure of the audit firm only.

Anticipation of Accounting Restatements at Peer Firms

One reason investors may anticipate a restatement by the peer firm is due to use of the representativeness heuristic. Kahneman (2011) describes this heuristic as, "the question about probability (likelihood) was difficult, but the question about similarity was easier, and it was answered instead." In other words, some investors may assume that reporting entities with similar characteristics (e.g., those with the same partner) are all members of the same class (e.g., restating firms). Gleason et al. (2008) investigate whether investors' response to the linked/peer firm (via stock price decline) to a restatement by the contaminated (i.e., restating) firm is due to the anticipation of a subsequent restatement at the linked firm. Their expectation is that they will observe greater investor contagion for firms linked to the contaminated firm that actually experience a later restatement than they will for firms linked to the contaminated firm that do not experience a later restatement. As discussed earlier, they find no evidence that investors are able to correctly anticipate subsequent restatements by peer firms. As Gleason et al. (2008) note, however, their exploration of this research question involves a joint test of whether (1) the restatement at the contaminated firm functions as a catalyst for altering investors' perceptions about the content and credibility of the peers' financial statements and (2) whether investors can correctly predict *which* peer firms are likely to later restate; the latter of which is an exceedingly difficult task for investors to perform. Using the advantage of an experimental setting, we are able to focus on the former aspect of this research question—whether the contaminating firm's restatement increases investors' perceptions of the likelihood that the peer firm will experience a restatement. We hypothesize the following:

H2: Investors will assess a peer firm linked to a restating firm via an audit partner to be more likely to experience a subsequent restatement than a peer firm linked to a restating firm via an audit firm only.

Even if investors anticipate the peer firm is likely to experience a restatement in the future, they may avoid investing in the peer firm due to expectations of diminished economic prospects associated with the peer firm that are unrelated to accounting quality (i.e., the potential for a subsequent restatement). For example, they may assume that the audit partner's involvement in the governance of the firm extends beyond financial reporting and covers areas such as the company's business risk. However, Gleason et al. (2008) conclude that the contagion effect they find is a result of concerns over accounting quality rather than expectations of diminished economic prospects because their results are unrelated to changes in analysts' EPS forecasts coincident with the restatement, but are stronger for peer firms with low accounting quality (as proxied by high accruals). Research shows that stock prices of restating firms fall, on average, by somewhere between 6 percent and 10 percent when a restatement is first made public (Gleason et al. 2008). So, investors expecting a restatement in a company that they are considering as an investment opportunity are likely to avoid investing in the company (at least until the company has announced the restatement and experienced the initial stock price decrease). Based on the notion that investor contagion is a result of reduced investor perceptions of the credibility of linked firms' financial statements (Gleason et al. 2008), we predict the following:

H3: The investment contagion effect is mediated by investors' perception of the likelihood that the peer firm will experience a subsequent restatement.

METHOD

Participants

Two hundred twenty-five individuals with investment experience participated in the study and were randomly assigned to one of the two conditions.[3] As a manipulation check, we asked respondents a yes/no question as to whether the audit partner's name was disclosed in the information provided. Of the 225 individuals, 157 (70 percent) successfully answered the question; we use the participants who passed the manipulation check in our analyses. We initially recruited approximately 14 percent of our participants through personal contacts of groups known to have investing experience (e.g., the National Association of Investors Corporation); however, we obtained the majority of our participants (approximately 86 percent) using Qualtrics—a survey software and research firm.[4] Qualtrics contacted potential participants using a selection procedure that ensured participants' demographic information was representative of the U.S. population as a whole (as determined by recent U.S. census data) and allowed for matching on selectable criteria (Anagol and Gamble 2013; Wright and Carlucci 2011). Our selection criteria required participants to be college graduates over the age of 25, who were not CPAs, and who had experience actively trading individual shares of stocks (i.e., 401(k) and/or mutual fund investing experience was not sufficient) or bonds.[5] As shown on Table 1, our average participant was approximately 49 years old, had over five-and-a-half years of work experience preparing or analyzing financial information, and had experience investing in approximately three different forms of investment instruments (*INV_EXP_DIVERSE*).[6] Approximately 47 percent of respondents were female.

Task and Procedure

We created our experimental instrument based on Kida et al. (1998).[7] First, we instructed participants that they would be asked to review and provide their opinions of five hypothetical companies for long-term investment purposes. We also informed

[3] This study received approval from the institutional review boards of the authors' affiliated institutions at the time of data collection (Georgia State University, University of Massachusetts Amherst, and Oklahoma State University).

[4] Qualtrics does not disclose the amount by which they compensate survey respondents. Participants recruited through personal contacts were not compensated for participation. Participant type was randomly distributed across conditions ($p = 0.236$), and participants from both groups were presented with the exact same experimental instrument. Due to significant differences in the method of identification, contact, compensation of participants, and participant demographics (e.g., age and gender), we also run our analyses controlling for participant type. As discussed later in more detail, our results are robust to including participant type as a control variable.

[5] We chose not to include CPAs in our sample because, based on the reaction of public accounting firms and associations to the concept release, such participants would be more aware of the potential amendment. Thus, they are more likely to engage in hypothesis guessing and respond in such a way that would skew our results.

[6] Investment diversity experience (i.e., the total number of different types of investment instruments a participant had experience investing in) was significantly different between conditions. Specifically, those in the partner identification condition had significantly more diversity in investment instrument types ($M = 2.84$) (at a marginal level) than those in the firm only condition ($M = 2.57$; $p = 0.066$). Accordingly, we control for investment experience diversity in our analyses. There were no significant differences between conditions on our other demographic measures.

[7] We made modifications to the instrument because our scenario required a restatement of financial information and because the original instrument involved two stages to study the impact of encoded memory traces for numerical data. Our modifications also included adding information related to our manipulations and reducing the number of ratios and firms presented. Finally, we created fictitious names for our companies to add a sense of realism to the task and to underscore that all of the companies operated within the same industry.

TABLE 1

Participant Demographics and Investing Experience[a]

	FIRM	*APD*	Overall
Age[b]	48.77	50.01	49.48
Gender[c]	44.77%	55.22%	47.85%
Qualtrics[d]	81.67%	88.75%	85.71%
FS Preparation Experience[e]	5.47	5.53	5.50
INV_EXP_DIVERSE	2.57	2.84	2.72

[a] There were no differences found between conditions for demographic or investment experience variables, except for that discussed in footnote 5.
[b] Age represents the mean of the participants' age in years.
[c] Gender reports the percentage of female respondents.
[d] Qualtrics reports the percentage of respondents acquired through Qualtrics panels.
[e] FS Preparation Experience reports the mean number of work years that participants were "responsible for preparing or analyzing financial information."

Variable Definitions:
APD = indicator variable equal to 1 if a participant is a member of the condition in which the partner name and firm name were disclosed, and 0 otherwise; and
INV_EXP_DIVERSE = the number of investment instruments in which a participant had experience investing (e.g., a participant who had experience investing in stocks, bonds, and mutual funds would have an investment experience diversity of 3). In order to be selected for the study, all participants had to have experience investing in individual stocks or bonds. The other categories comprising this variable are "Mutual Funds," "Retirement," and "Other." Examples of instruments included in "Other" were gold, silver, options, and real estate.

participants that they would be provided with performance measures based on each company's most recent audited annual financial statements.[8] Finally, we noted that each company was publicly traded, within the same industry, located in the same region, and had received an unqualified financial statement opinion from one of the Big 4 accounting firms operating within the same city.

Second, participants received financial data on the five potential investment companies ("American Computers," "Computer World," "Electronics USA," "US Technologies," and "Wired States"). In each condition, we provided participants with a generic Big 4 audit firm name (e.g., Firm ABC or Firm DEF) and five numerical accounting measures (i.e., current ratio, days' sales of inventory, return on assets, profit margin, and market share). Similar to Kida et al. (1998), one firm was markedly better than the other four firms on all of the data dimensions provided. Specifically, US Technologies' performance metrics were better (in every category) than each of the other four firms listed, making it the optimal investment from a quantitative financial data perspective.[9]

Third, we informed participants that one firm, Wired States, recently restated its prior-year audited financial statements. We provided participants with updated performance measures for Wired States. Fourth, we presented participants with a table summarizing the performance measures for all companies, highlighting updated performance measures for the restating firm (presented in Figure 1).

Finally, in the midst of the performance measures that we presented to participants, we also manipulated the auditor information available as either firm name (*FIRM*), or firm name and the partner's identity (*APD*), using a 1 × 2 between-participants experimental design. While we did not make specific mention of it to the participants, participants in the *FIRM* (*APD*) condition were able to identify that the same audit *firm* (*firm* and *partner*) that had audited the quantitatively optimal investment choice (US Technologies) also audited the restating firm (Wired States). This allowed us to examine the impact of a partner-based contagion effect *above and beyond* any effect due to shared industry and shared audit firm. That is, we deliberately incorporated contagion effects that have been documented by prior literature into our design so that we could examine the *incremental* contagion that may result from APD.

Dependent and Other Measures

We use participants' likelihood of choosing US Technologies (i.e., the quantitatively optimal choice "peer" firm that is linked to the restating firm via the same audit partner) as their preferred investment choice to test H1. Participants chose the "ONE company that [they] would most likely choose for a long-term investment." During this portion of the experiment, participants were able to select only one of the five potential investment choices and were unable to return to this screen after providing their response. We code our variable of interest, *INVEST_UST,* as 1 if investors chose to invest in US Technologies, 0 otherwise.

[8] Although our participants should have been familiar with all of the performance measures we used in the study, we provided each participant with an addendum explaining each performance measure used in the case in order to unify the definition for each participant. Participants were free to review the addendum at any time during the case.
[9] We present a reduced information set to participants in order to keep the task manageable and avoid potential confounds.

FIGURE 1
Final Presentation of Investment Options

Company Name	**American Computers**	**Computer World**	**Electronics USA**	**US Technologies**	**Wired States**
Big 4 Audit Firm	Firm ABC	Firm ABC	Firm DEF	Firm DEF	Firm DEF
Audit Partner[a]	David Lastings	David Lastings	James Keaton	Thomas Edwards	Thomas Edwards
Current Ratio	2.35	2.25	2.37	2.38	2.23 → 1.97
Days Sales of Inventory	28	32	27	25	39 → 65
Return on Assets	12.3	9.8	12.6	12.9	8.1 → 4.8
Profit Margin	14.5	11.4	14.7	14.8	8.3 → 5.0
Market Share	8.41	6.74	8.5	8.7	5.53 → 5.22

[a] The audit partner's name was only included in the *APD* condition.

We also measured participants' assessment of the likelihood that US Technologies will experience a restatement (*RESTATE_UST*). We asked participants "For EACH company, indicate the likelihood that it will experience a restatement at some point in the next three years" (measured on an 11-point Likert-type scale with 1 = very unlikely, and 11 = very likely). We compare *RESTATE_UST*, between conditions, as the primary measure for testing H2. We perform a mediation analysis, using *INVEST_UST* as the dependent variable of interest and *RESTATE_UST* as the mediator, to test H3.

Finally, we gathered post-experimental measures to clarify additional reasons behind participants' responses. For example, we collected the extent to which participants believe the restating company (*FAULT_COMP*), the audit firm (*FAULT_FIRM*), and the audit partner (*FAULT_PARTNER*) are at fault when a company must restate their financial statements (each measured, separately, on an 11-point scale where 1 = not at all at fault, and 11 = completely at fault), and participants' familiarity with the financial information provided and the process of auditing financial statements (*FAM_FIN, FAM_AUDITING*) (each asked, separately, on an 11-point scale where 1 = not at all familiar, and 11 = very familiar).

RESULTS

Hypotheses Testing

Accounting Information Contagion

Our first hypothesis states that APD will result in incremental accounting information contagion. Table 2 presents the results of H1 testing using our primary dependent measure—*INVEST_UST*. Specifically, Panel A of Table 2 presents preferred investment choice statistics and Chi-squared comparisons between conditions. In support of H1, we find that *FIRM* participants (76.9 percent) were significantly more likely to choose US Technologies than *APD* participants (64.1 percent; p = 0.043, one-tailed).[10,11]

[10] We hesitate to make inferences regarding the economic significance of our results as the basis of generalizability, when using an experimental design, is the directional effects rather than magnitude (Trotman 1996; Libby, Bloomfield, and Nelson 2002). That being said, we note that while 64 percent of participants chose to invest in the peer firm in the *APD* condition, which is a decrease of 17 percent (if looked at as a rate of change in comparison to the preexisting *FIRM* condition). This 17 percent decrease is above and beyond any firm-related effects, which are already subsumed within the 23 percent of participants who chose not to invest in the optimal firm (from a quantitative measure standpoint).

[11] The percentages shown in Table 2 do not add to 100 percent because 3.1 percent (9.8 percent) of our participants in the *FIRM* (*APD*) conditions choose to invest in the restating company (the difference between conditions is not significant, p = 0.105). The fact that some investors choose to invest in a firm that has recently experienced a restatement is consistent with real-world market behavior. For example, on May 14, 2015, Hertz Corporation announced a financial statement restatement and yet still experienced trading volume of 12.1 million shares, 7.8 million shares, and 12.8 million shares on the day prior to, the day of, and the day following the restatement announcement, respectively. We can only speculate that such investors are expecting that the long-term prospects of the company are not materially affected by the restatement (see, for example, Tan and Young 2015) and/or are hoping to benefit from an undervaluation of the stock due to overreaction to the restatement.

TABLE 2

Investment Choice Information Contagion

Panel A: Investment Choice[a]

	FIRM	*APD*	Pearson χ^2 *FIRM* versus *APD* p-value[b]
American Computers	3.1%	4.4%	0.682
Computer World	9.2%	5.4%	0.359
Electronics USA[c]	7.7%	16.3%	0.111
US Technologies[d]	76.9%	64.1%	0.043
	(n = 65)	(n = 92)	

Panel B: Logistic Regression on Investment in US Technologies

$INVEST\_UST = b_0 + b_1APD + b_2INV\_EXP\_DIVERSE + \varepsilon_I$

Variable	Expected Sign	Coefficient (S.E.)	p-value[b]
Intercept	+	0.720 (0.496)	0.146
APD	−	−0.692 (0.373)	0.032
INV_EXP_DIVERSE	?	0.194 (0.164)	0.236

[a] Percentage breakdown of single investment choice. Participants chose the "ONE company that [they] would most likely choose for a long-term investment."
[b] One-tailed p-value where directional effect is predicted.
[c] Firm with the second-highest-ranked performance measures: same audit firm, but different audit partner as the restating firm.
[d] Firm with the highest-ranked performance measures: same audit firm and same audit partner as the restating firm.

Variable Definitions:
APD = indicator variable equal to 1 if a participant is a member of the condition in which the partner name and firm name were disclosed, and 0 otherwise;
INVEST_UST = binary variable indicated by 1 if investors chose to invest in US Technologies, 0 otherwise; and
INV_EXP_DIVERSE = the number of investment instruments in which a participant had experience investing (e.g., a participant who had experience investing in stocks, bonds, and mutual funds would have an investment experience diversity of 3).

To get a better understand of our results, and to control for *INV_EXP_DIVERSE,* we next perform a logistic regression using the following model:

$$INVEST\_UST = b_0 + b_1APD + b_2INV\_EXP\_DIVERSE + \varepsilon_I \quad (1)$$

where *INV_EXP_DIVERSE* represents the number of investment instruments in which a participant had experience investing (see Table 1 for a more complete definition). Panel B of Table 2 presents results of our logistic regression. Consistent with H1, *APD* is a significant negative predictor of whether investors chose US Technologies as their single investment choice ($b_1 = -0.692$; $p = 0.032$, one-tailed).[12]

Taken together, we interpret our results to suggest that APD will likely lead to reprioritization of investment choices and away from firms linked to "contaminated" organizations. It is important to note that the effects we observe are incremental to audit firm contagion (as all participants were provided with the information that US Technologies was linked to the contaminated firm via the same audit firm, while APD participants saw both the audit firm *and* partner name). That is, our results suggest that audit partner identity disclosure results in partner-based contagion above and beyond any effect due to shared industry and shared firm.

[12] If we control for participant type (i.e., whether the participant was recruited through Qualtrics), then the significance of our results reduce slightly ($b_1 = -0.606$; $p = 0.055$).

TABLE 3

Restatement Information Contagion
Linear Regression on Likelihood of US Technologies Restatement

$RESTATE\_UST = b_0 + b_1 APD + b_2 INV\_EXP\_DIVERSE + \varepsilon_I$

Variable	Expected Sign	Coefficient (S.E.)	p-value[a]
Intercept	+	6.156 (0.662)	< 0.001
APD	+	1.374 (0.481)	0.002
INV_EXP_DIVERSE	?	−0.188 (0.217)	0.387

[a] One-tailed p-value where directional effect is predicted.

Variable Definitions:
APD = indicator variable equal to 1 if a participant is a member of the condition in which the partner name and firm name were disclosed, and 0 otherwise;
RESTATE_UST = participants' response to the likelihood that US Technologies will experience a restatement at some point in the next three years (measured on an 11-point Likert-type scale with 1 = very unlikely, and 11 = very likely); and
INV_EXP_DIVERSE = the number of investment instruments in which a participant had experience investing (e.g., a participant who had experience investing in stocks, bonds, and mutual funds would have an investment experience diversity of 3).

Restatement Likelihood Assessments

H2 predicts that investors will assess a peer firm linked to a restating firm via an audit partner to be more likely to experience a subsequent restatement than a peer firm linked to a restating firm via an audit firm. In other words, we expect *APD* condition participants to provide higher assessments of the likelihood that US Technologies will experience a restatement in the future (*RESTATE_UST*) than will *FIRM* condition participants. In support of H2, we find that *FIRM* participants are significantly less likely to expect US Technologies to experience a restatement than *APD* participants (respective means = 5.68 and 6.99; p = 0.003, one-tailed). We also note that *APD* participants perceived US Technologies to be significantly more likely to experience a restatement than Electronics USA (mean = 6.62; p = 0.018, one-tailed), which was audited by a different partner but the same firm as US Technologies, providing further support for H2; while *FIRM* participants did not perceive a similar difference (respective means = 5.68 and 5.66; p = 0.915). To formally test H2, we perform a linear regression using the following model:

$$RESTATE\_UST = b_0 + b_1 APD + b_2 INV\_EXP\_DIVERSE + \varepsilon_I \quad (2)$$

Table 3 presents results of our linear regression. Consistent with H2, *APD* is a significant positive predictor of whether participants perceive US Technologies to be more likely to experience a restatement ($b_1 = 1.374$; p = 0.002, one-tailed).[13] Our results provide support for H2 and indicate that investors expect a firm associated with a restating firm to be more likely to experience a future restatement when the link between the two firms is through both the same audit partner and audit firm than when only the firm is shared.

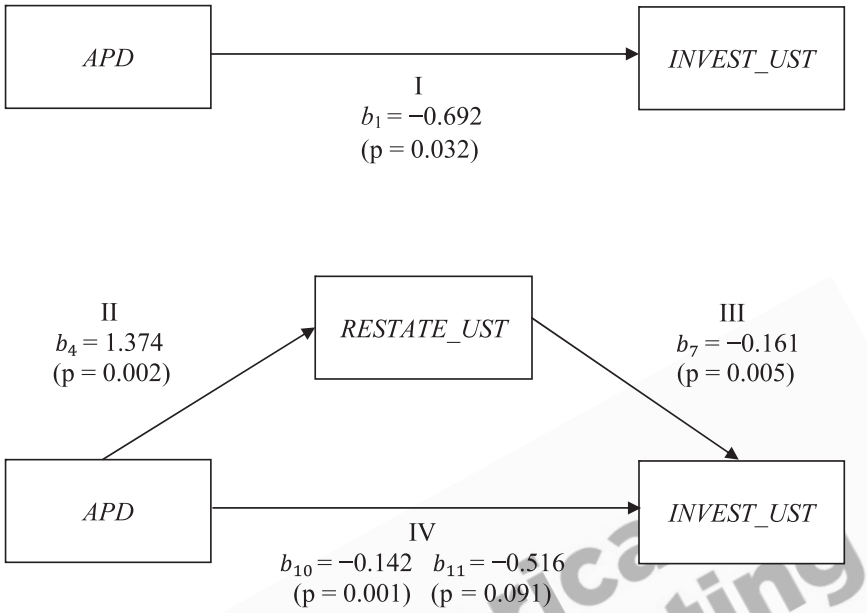
Restatement Likelihood: Mediation Analysis

H3 predicts that perceptions of restatement likelihood mediate the investment contagion effect associated with audit partner identity disclosure. Figure 2 presents the results of our mediation analysis for investment choice. The figure incorporates a combination of four regression models, as per a Baron and Kenny (1986) mediation analysis. Our results from Table 2 provide support for the first assumption of mediation in that we find a significantly negative coefficient on *APD* for *INVEST_UST* ($b_1 = -0.692$; p = 0.032).

Our results from Table 3 provide support for the second assumption of the mediation in that we find a significant positive coefficient on *APD* for *RESTATE_UST* ($b_4 = 1.374$; p = 0.002). We find support for the third assumption of mediation as we

[13] We note that when we add a control for participant type to Model (2), our results remain substantially unchanged (*APD* coefficient p = 0.006, one-tailed).

FIGURE 2
Investment Choice Mediation Analysis



I: $INVEST\_UST = b_0 + b_1 APD + b_2 INV\_EXP\_DIVERSE + \varepsilon_I$
II: $RESTATE\_UST = b_3 + b_4 APD + b_5 INV\_EXP\_DIVERSE + \varepsilon_I$
III: $INVEST\_UST = b_6 + b_7 RESTATE\_UST + b_8 INV\_EXP\_DIVERSE + \varepsilon_I$
IV: $INVEST\_UST = b_9 + b_{10} RESTATE\_UST + b_{11} APD + b_{12} INV\_EXP\_DIVERSE + \varepsilon_I$

Variable Definitions:
APD = indicator variable equal to 1 if a participant is a member of the condition in which the partner name and firm name were disclosed, and 0 otherwise; and
INVEST_UST = indicates dichotomously whether a participant invested in US Technologies (1 = invested in US Technologies; 0 = invested in another choice);
RESTATE_UST = the participant's response to the likelihood of US Technologies experiencing a restatement in the near future (recorded on an 11-point scale where 1 = very unlikely, and 11 = very likely); and
INV_EXP_DIVERSE = the number of investment instruments in which a participant had experience investing (e.g., a participant who had experience investing in stocks, bonds, and mutual funds would have an investment experience diversity of 3).

find that the mediator, *RESTATE_UST*, is a significant negative predictor of *INVEST_UST* ($b_7 = -0.161$; p = 0.005). Finally, when we include *RESTATE_UST* in a model that includes *APD*, while the effect of *RESTATE_UST* remains a significant predictor of *INVEST_UST* ($b_{10} = -0.142$; p = 0.001), we find the effect of *APD* on *INVEST_UST* ($b_{11} = -0.516$; p = 0.091, one-tailed) becomes only marginally significant.[14]

Taken together, these results indicate that judgments of restatement likelihood mediate the contagion effect and provide support for one of the explanations conjectured by archival-based studies (e.g., Gleason et al. 2008) for accounting information contagion. That is, the APD-induced contagion exhibited in our study is caused by reduced investor perceptions of the credibility of the financial information provided by the linked peer firm.

Supplemental Analyses

We also examine whether our results for APD's effects on *INVEST_UST* are robust to the inclusion of different experience variables. Specifically, we rerun our logistic regression presented in Table 2, but independently (i.e., in separate regressions) include control variables for familiarity with the audit process (*FAM_AUDITING*) and familiarity with the financial information

[14] Controlling for participant type (i.e., whether the participant was recruited through Qualtrics) in Model IV results in full mediation, as *APD* becomes a nonsignificant predictor of *INVEST_UST* ($b_1 = -0.454$; p = 0.123, one-tailed).

presented in the study (*FAM_FIN*). In untabulated results, we find that *APD* remains a significant predictor of *INVEST_UST* when *FAM_AUDITING* ($b_1 = -0.636$; $p = 0.046$) or *FAM_FIN* ($b_1 = -0.691$; $p = 0.032$) are included as control variables.

Also in untabulated results, we find that while *APD* participants were not more likely than *FIRM* participants to perceive companies, *FAULT_COMP* ($t = -0.978$; $p = 0.330$, two-tailed), or audit firms, *FAULT_FIRM* ($t = -0.579$; $p = 0.563$, two-tailed), to be at fault for a restatement, consistent with our theory, *APD* participants were marginally more likely to perceive partners to be at fault ($t = -1.408$; $p = 0.080$, one-tailed) than *FIRM* participants. In other words, the mere knowledge of the audit partner's name may increase the extent to which investors blame the partner for a financial statement restatement; however, we do not draw strong conclusions from this test given the marginal significance of the results.

CONCLUSIONS AND IMPLICATIONS

We design and perform an experiment to examine investor reaction to audit partner disclosure and to determine whether it facilitates accounting information contagion above and beyond any that might occur due to a shared audit firm and industry. In so doing, we find that prospective investors are significantly less likely to invest in a peer firm linked to a contaminated firm via a shared audit partner than when the organizations are only linked via a shared audit firm. We also find support for the notion that the contagion effect works by causing investors to reassess the content and credibility of financial statements issued by linked firms. Finally, we find some evidence to suggest that knowledge of the partner's name increases the extent to which investors attribute blame to the partner for a negative financial statement/audit outcome (specifically, a restatement).

Inferences from our analyses should be made in light of certain limitations. First, for the sake of brevity, participants were only provided with limited information rather than a full set of financial information. While we did utilize key financial statement ratios, the possibility exists that other information within a complete set of financial statements could moderate our results. Second, the majority of our participants were recruited and participated in the study online via Qualtrics; while these participants were experienced investors, the extent to which such participants were invested in the decision is likely to be less than that of an actual investor making decisions with his or her own funds. Third, we used fictitious audit firm names in the study. Thus, it is unknown how previous firm reputation would moderate the results of audit partner disclosure; however, this limitation presents opportunities for future research (e.g., firm familiarity may minimize the partner contagion effect).

We offer other interesting avenues for future research. First, our findings indicate that investors' decisions were mediated by the credibility of the financial information provided (i.e., their assessment of the likelihood of a restatement). Subsequent studies can more fully explore other potential causes for the effect and whether the credibility of the financial information provided is a mediator for contagion effects driven by factors unrelated to the financial statement audit (e.g., shared industry, shared directors). In addition to potential additional mediators, future studies can investigate potential moderators of the effect we observe in our experiment (e.g., the reason for the restatement, the extent of auditor culpability, and the level of audit partner disclosure salience). Second, future research can explore the extent to which an audit partner-induced contagion effect may occur due to positive information (e.g., an audit partner uncovering a complicated fraud scheme at a new client). That is, based on the existing research, we define a contagion effect as relating to a negative event; however, it is possible that positive news can also result in information transfer, particularly with respect to the "track record" of a particular partner. The extent to which, and under what circumstances, partner disclosure affects investors' attribution of blame or credit to the engagement partner may impact outcomes that are important to audit firms (e.g., client retention, legal liability). Finally, the transfer of information from one client via an audit partner to another client suggests a fusing of the audit partner's and audit client's reputations. If audit partners are motivated to achieve many of the same goals as management, in order to protect their reputation and/or client portfolio, then APD may result in the audit partner's immediate, short-term incentives being more closely aligned with client management's. Thus, future studies can explore the impact of investor reaction to APD on audit partner independence and decision making.

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