

Experimental evidence of how prior experience as an auditor influences managers' strategic reporting decisions

Kendall O. Bowlin · Jeffrey Hales ·
Steven J. Kachelmeier

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Abstract We design an experiment to examine the influence of audit experience on subsequent reporting decisions when auditors become managers of audited firms. In contrast to the independence issues that can arise when auditors and their clients are related by prior affiliation, we focus this study on the more common case in which auditors assume subsequent employment with *other* firms' clients. In a bi-matrix experimental game that captures key features of the strategic tension between auditors and reporters, we find that reporters who have prior experience as an auditor, particularly the experience of having been a diligent auditor, are more sensitive to large penalties for aggressive reporting than are reporters whose experience is exclusively as a reporter. Our results suggest implications for regulators in predicting the effects of reporting penalties and for firms in considering the effects of CPA experience when hiring for reporting positions.

Keywords Experimental economics · Reporting · Auditing · Experience · Own-payoff effect

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K. O. Bowlin
Patterson School of Accountancy, University of Mississippi, 200 Conner Hall, University,
MS 38677, USA
e-mail: kobowlin@olemiss.edu

J. Hales
College of Management, Georgia Institute of Technology, 800 West Peachtree Street NW,
Atlanta, GA 30308, USA
e-mail: Jeffrey.Hales@mgt.gatech.edu

S. J. Kachelmeier (✉)
Department of Accounting, McCombs School of Business, University of Texas at Austin,
1 University Station B6400, Austin, TX 78712, USA
e-mail: kach@mail.utexas.edu

1 Introduction

Public accounting is often a steppingstone to other careers. One common path is for auditors to move into managerial positions that involve financial reporting responsibilities. In a sample of 3,063 firms, Lennox (2005) reports that 21.9% employ at least one executive officer with prior CPA experience. Because prior audit experience affords reporters with a closer look at what it is like to be an auditor, having such experience could shape the way in which reporters approach the task of making strategic reporting decisions, such as deciding which accounting policies to adopt or how much to invest in developing internal controls.¹ In this study, we provide theory and experimental evidence that prior experience as an auditor does indeed influence subsequent reporting behavior: reporters are more sensitive to consequences of detected aggressive reporting when they have prior experience as an auditor than when they have gained the same amount of experience exclusively as a reporter.

Prior research focuses on the independence issues that surface when reporters and their auditors are tied by previous affiliation (Menon and Williams 2004; Lennox 2005). Although these issues are clearly important, the majority of executives with former audit experience are *not* affiliated in this manner. Lennox (2005, Table 2) reports that, of 968 executives with CPA experience, approximately two-thirds (65%) had not previously worked for their firm's current auditor. Auditor–client affiliations are likely to be even less common in the future, given that Section 206 of the Sarbanes-Oxley Act of 2002 prohibits auditors from assuming reporting positions within one year of auditing a client. Because there is no such restriction against auditors assuming reporting positions with *other* firms' audit clients, we focus the current experiment on the effects of *unaffiliated* prior audit experience on subsequent reporting behavior.

Our particular interest is in understanding how prior audit experience bears upon the sensitivity of reporters to different payoff consequences of auditor-detected misstatements. As a practical analog, the requirement in Section 404 of the Sarbanes-Oxley Act for auditors to express an opinion on internal controls has elevated the penalties for misreporting, giving auditors a new vehicle for publicly disclosing detected errors that arise from material control weaknesses. Before Sarbanes-Oxley, these errors could simply be corrected, thereby generating the same unqualified audit opinion that would have resulted in the absence of a detected error. Reporters therefore face greater exposure in the current environment for misstatements that are detected by auditors. Because former auditors have experience in detecting misstatements, we argue that their subsequent decisions as reporters will be particularly sensitive to whether the consequences of detected aggressive reporting behavior are strong or weak.

To test this premise, we conduct an interactive laboratory experiment that incorporates key features of the strategic interplay between reporters and auditors, focusing on how auditing experience influences the way reporters respond to

¹ We use the term “reporters” loosely to include any executive, manager, or accountant with discretionary reporting responsibilities for an audited entity.

economic forces. An interactive study captures the richness of viewing financial reporting as a strategic game that hinges on the anticipation of others' responses (Berg et al. 1995; Kachelmeier and King 2002), while using the tools of experimentation to isolate the institutional accounting features of interest and abstract away from other features (Libby et al. 2002; Maines et al. 2006). In a 2×2 factorial design, we manipulate (1) the payoff for detected aggressive reporting behavior and (2) whether experienced participants in the reporter role have prior experience as auditors or as reporters. We find a significant interaction between these two experimental factors, indicating that reporters with prior audit experience are significantly more sensitive to different reporting payoffs than are reporters with the same amount of total experience accumulated solely in the reporting role.

More specifically, we find that the effectiveness of prior audit experience in deterring subsequent aggressive reporting is most pronounced when the payoff regime imposes relatively severe consequences for aggressive reporting that is detected by an auditor. As explained shortly, that regime induces a natural propensity to report cautiously, thereby providing little information to reporters about auditors. Like most first-time reporters, former auditors are initially cautious when they face severe consequences for aggressive reporting. Unlike other reporters, however, we find that former auditors, particularly those who were relatively diligent auditors, are less likely to experiment with aggressive reporting when the payoff regime makes experimentation relatively risky. In contrast, we find little effect of audit experience on subsequent reporting behavior when the consequences of detected aggressive reporting are relatively mild, thereby inducing a natural propensity to report aggressively and providing more abundant feedback about auditors.

While subject to the inherent limitations of an abstract experiment, our findings suggest implications for both regulators and corporate boards. For regulators, our findings suggest that experience as an auditor can make reporters more sensitive to regulatory sanctions. For boards' hiring decisions, our findings highlight the importance of considering whether executives have audit experience and, to the extent that it is observable, how diligent they were as auditors. When regulatory regimes impose significant consequences for misreporting, our results suggest that experience as a diligent auditor tends to make one a cautious reporter.

In Section 2, we describe the game-theoretic setting underlying our experiment, as the basis for developing theory-based predictions in Section 3. We describe the experimental design in Section 4, followed by results and implications in Sections 5 and 6, respectively.

2 Setting

Consistent with several analytic models (such as Fellingham and Newman 1985; Newman and Noel 1989; Bloomfield 1995; Newman et al. 1996, 2005) and experiments (such as Kachelmeier 1991; Bloomfield 1997; King 2002; Mayhew and Pike 2004), we characterize financial reporting as a strategic game between a reporter and an auditor. A prime insight from applying a game-theoretic view is that

Table 1 Payoff structures^a (mixed-strategy equilibrium probabilities in parentheses)

Panel A: Weak-deterrent regime		
Reporter actions	Auditor ^b actions	
	Diligent (.750)	Lax (.250)
Cautious (.333)	5, 6	5, 8
Aggressive (.667)	4, 5	8, 4
Panel B: Strong-deterrent regime		
Reporter actions	Auditor actions	
	Diligent (.375)	Lax (.625)
Cautious (.333)	5, 6	5, 8
Aggressive (.667)	0, 5	8, 4

^a Point payoffs are tabulated in each cell for the reporter and auditor, respectively, from a given choice combination. For example, if the reporter chooses “cautious” and the auditor chooses “diligent,” the reporter receives five points and the auditor receives six. The only difference between the payoffs shown in the two panels is whether the reporter’s payoff is four (weak-deterrent regime) or zero (strong-deterrent regime) when the reporter chooses “aggressive” and the auditor chooses “diligent”

^b The labels shown here are used as an expository convenience. In the experiment, the reporter and auditor roles were labeled “blue player” and “green player,” respectively, with blue choosing between “up” and “down” and green choosing between “left” and “right”

the behavior of reporters and auditors is determined endogenously as the best response to the other party’s behavior. Accordingly, while strategic behavior by both the reporter and the auditor are “risk-based” (for example, O’Donnell and Schultz 2005), those risks are moving targets. Table 1 shows the two versions of the strategic reporting game that we investigate in this research.

As explained in more detail later, our experiment implements a common-information equivalent of the games shown in Table 1 but with neutral terminology in lieu of the contextually rich labels used in this paper as an expository convenience. Although our experimental participants do not literally “report” assertions or “audit” those assertions, their joint actions generate payoffs that can be interpreted as the consequences of aggressive or cautious reporting, in combination with diligent or lax auditing.

While real-world reporting and auditing decisions are more complex than the simple dichotomous choices in Table 1, those choices do capture the strategic tensions that auditors and reporters face several times during a real-world audit, such as when an auditor chooses sample sizes or a reporter makes account-specific reporting decisions. In each of these decisions, the critical feature characterizing the reporting game we consider is that a pure strategy of consistent cautious reporting and consistent diligent auditing does not constitute an equilibrium. The reason is that, if the reporter is cautious, the auditor can save the cost of auditing by choosing the “lax” option, but lax auditing presents the reporter with an opportunity to reap short-term gains by reporting aggressively. The game-theoretic solution to this dilemma is a mixed-strategy equilibrium, in which each player chooses an

equilibrium probability for each action that makes the other player indifferent. As such, neither player has as an incentive to defect from the probabilities thereby determined. Table 1 shows the mixed-strategy equilibrium probabilities for both versions of the game we consider.

Mixed-strategy games have been studied extensively in economics (for example, Ochs 1995; Goeree and Holt 2001; Goeree et al. 2003). While our setting captures the same basic mixed-strategy tension of these other studies, we modify the game in three important ways to focus on the reporting environment of present interest. First, we manipulate the reporter's payoff when the auditor detects aggressive reporting (the cell with aggressive reporting and diligent auditing), as shown in the two panels of Table 1. In Panel A, hereafter labeled the "weak-deterrent" regime, a reporter who faces a diligent auditor receives only a slightly lower payoff for aggressive reporting (4) than for cautious reporting (5). In contrast, a reporter facing a diligent auditor in the "strong-deterrent" regime of Panel B receives a much lower payoff for aggressive reporting (0) than for cautious reporting (5).

These two payoff conditions capture the essence of an important change in the reporting environment brought about by the Sarbanes-Oxley Act of 2002. Before Sarbanes-Oxley, an auditor-detected misstatement could be largely a private matter, resulting in a pre-release adjusting entry to correct the error and an unqualified audit opinion on the financial statements. Conversely, under Sarbanes-Oxley Section 404, even if the auditor issues an unqualified opinion on the financial statements, the auditor must also issue an adverse opinion on the internal controls underlying those financial statements when such controls exhibit material weaknesses. The Ives Group (2005) reports that the "leading predictor of an adverse Section 404 opinion is a significant year end or auditor initiated adjustment." Presumably, the public disclosure of auditor-detected errors elevates the repercussions for management. Of course, Sarbanes-Oxley likely also changed other payoffs in the auditor-reporter game, including auditor payoffs. While we do not deny those possibilities, we focus on this one change to maintain *ceteris paribus* conditions, leaving other structural changes prompted by Sarbanes-Oxley to other studies.

A second modification is that the reporter's payoff for *cautious* reporting is held constant (at 5 points), irrespective of the auditor's choices. This feature captures an inherent real-world asymmetry in the ability of reporters to learn about auditors. Namely, unless a reporter "tests the waters" by reporting aggressively, the reporter's outcome feedback from immediate payoffs does not reveal whether the auditor employed a diligent or a lax audit strategy. To be sure, real-world reporters can observe some audit actions, but we nevertheless submit that a fundamental characteristic of being audited is that one cannot directly learn the auditor's detection strategy unless there is something for the auditor to detect. Our experimental setting operationalizes a strong form of this characteristic by holding constant the cautious reporter's payoff (and hence feedback), whether the corresponding auditor chooses a diligent or lax testing strategy. Reporters can still learn about auditors by choosing to report aggressively and observing what happens, but doing so is especially risky in the strong-deterrent regime of Table 1, Panel B.

As explained in more detail in Section 4, a third important modification is that we manipulate the nature of players' experience in a manner that, to our knowledge, has

not previously been examined in the literature. Specifically, in our “auditor–reporter” condition, former auditors become reporters, while in our “professional reporter” condition, former reporters remain reporters. We do not simply swap roles between reporters and auditors because we are interested in behavior when role-reversals are one-sided (that is, auditors often become reporters, but not vice versa). In the next section, we draw on this feature along with the payoff features described above to develop hypotheses.

3 Theory and hypotheses

3.1 The effect of different reporting payoffs on reporting behavior

To understand the effect of prior audit experience on reporters’ subsequent sensitivity to different payoffs for detected aggressive reporting, we must first consider the more basic effect of different reporting payoffs in general. As noted earlier, we consider two versions of a strategic reporting game: a weak-deterrent regime that confers only a slightly lower payoff to the reporter for detected aggressive reporting than for cautious reporting (Table 1, Panel A) and a strong-deterrent regime that confers a sharply lower payoff to the reporter for detected aggressive reporting (Panel B). One can interpret these two regimes as reflecting regulatory differences in the potential for reporters to incur market or other sanctions when aggressive reporting behavior is exposed in an audit. Although a lower payoff would seem to make aggressive reporting a less attractive action, the game-theoretic mixed-strategy equilibrium rate of aggressive reporting is identical in both regimes. The reason is that, in arriving at a mixed-strategy equilibrium, each player chooses probabilities to make the *other* player indifferent, reflecting only the other player’s payoffs.

Intuitively, the lower payoff for detected aggressive reporting in the strong-deterrent regime lowers the risk to the auditor that the reporter will report aggressively. Thus, *ceteris paribus*, this regime would indeed serve to deter aggressive reporting more effectively. However, the auditor’s best response to this lower risk is to select the diligent auditing option less frequently, such that the reporter no longer faces a *ceteris paribus* environment. The auditor’s best response can be likened to the logic of “risk-based” auditing (as in O’Donnell and Schultz 2005), whereby the auditor exerts less effort when risks are lower. In equilibrium, the auditor’s strategic adjustment exactly offsets the greater regulatory deterrence of the strong penalty, such that equilibrium *reporting* behavior is the same as in the weak-deterrent regime.

Notwithstanding this game-theoretic logic, research in psychology has identified a tendency for decision makers to be myopic and egocentric (Bazerman et al. 2000), attuning to their own payoffs in strategic settings and discounting others’ perspectives (Carroll et al. 1988; Hales 2008). In mixed-strategy games, the tendency for behavior to reflect variation in one’s own payoffs even when game-theoretic logic suggests that only others’ payoffs should matter in equilibrium has been termed the “own-payoff effect,” as documented in experimental economics studies such as Ochs (1995), Goeree and Holt (2001), and Goeree et al. (2003).

If reporters tend to fixate on their own payoffs, aggressive reporting will seem relatively attractive in the weak-deterrent regime and relatively unattractive in the strong-deterrent regime. Consequently, we expect reporters to exhibit an own-payoff effect, as we formalize in our first hypothesis:

H1: Reporters will select the aggressive reporting option less frequently in the “strong-deterrent” condition of Table 1, Panel B than in the “weak-deterrent” condition of Table 1, Panel A.

3.2 The moderating effect of experience

Insofar as the “own-payoff effect” predicted in H1 is off-equilibrium behavior, one might expect experience to mitigate reporters' continued susceptibility to that behavior. Our central premise is that this is indeed likely to be the case, and that the effect of the different learning paths that arise because of feedback differences in the strong- and weak-deterrent regimes will be moderated by whether a reporter has prior experience solely as a reporter (henceforth “professional reporter”) or also as an auditor (henceforth “auditor–reporter”). We discuss these moderating influences next, beginning with behavior in the strong-deterrent regime.

3.2.1 *Effect of experience in the strong-deterrent regime*

In the strong-deterrent regime, the own-payoff effect of H1 leads to overly cautious reporting behavior. If so, the ability of reporters to learn about auditors is limited, because the reporter's payoff from cautious reporting is invariant to auditor behavior. This feature captures what we see as a fundamental institutional characteristic of being audited: one can only probe the auditor's diligence by giving the auditor something to detect. Thus, if the own-payoff effect leads reporters to shy away from testing the auditors they face in a strong-deterrent regime, reporters will not learn as much in that regime, perpetuating their tendency to report cautiously.

Even so, natural curiosity about auditors is likely to lead reporters to test the waters by reporting aggressively, so long as doing so is not viewed as being too risky. Camerer (2003, Ch. 6) reviews several studies in which individuals do not reason out equilibrium strategies before playing a strategic game but rather learn by experimenting and adapting to outcome feedback (see Camerer and Ho 1999, or for an auditing example, King and Schwartz 1999). It is this propensity to experiment that we predict will be sensitive to the reporter's background. First consider professional reporters. Those who have never been auditors will likely approach the game as a challenge to learn about auditors. Even if they begin cautiously, curiosity about auditors encourages experimentation with aggressive reporting, which in turn facilitates adaptive learning, as shown in the studies reviewed by Camerer (2003).

Conversely, consider reporters who have prior experience as auditors. Like professional reporters, we expect former auditors to respond to the severe consequences of detected aggressive reporting in the strong-deterrent regime by reporting cautiously initially, but we also expect them to be less willing than professional reporters to experiment with aggressive reporting over time. Drawing

on social projection theory (Katz and Allport 1931; Krueger and Clement 1994; West 1996; Krueger 1998; Anderson and Camerer 2000), we expect experience as an auditor to suppress curiosity about others in that role. Put differently, social projection theory predicts that former auditors will sense that they already know what it is like to be an auditor and so will be less prone to risk a sharply lower payoff from detected aggressive reporting.

3.2.2 *Effect of experience in the weak-deterrent regime*

Now consider the weak-deterrent regime, for which the own-payoff effect of H1 leads to overly *aggressive* reporting behavior. Because aggressive reporting provides direct evidence of auditor behavior, reporters in the weak-deterrent regime do not need to overtly test the waters to receive ample feedback about auditors. Rather, if a weak-deterrent regime induces aggressive reporting, reporters will gain feedback about auditors, thereby facilitating convergence towards equilibrium. We do not expect that this behavior will depend on whether a reporter has the background of a professional reporter or an auditor-reporter, so we do not predict differences between these types of experience within the weak-deterrent regime. We expect that both professional reporters and auditor-reporters in the weak-deterrent regime will learn and adapt towards equilibrium.

3.2.3 *Summary of the moderating influence of experience*

In sum, the different experience effects that we expect for professional reporters and auditor-reporters derive from dividing the H1 “own-payoff effect” into its two components: a propensity for reporters to be too aggressive in the weak-deterrent regime and too cautious in the strong-deterrent regime. The first propensity should be mitigated by reporting experience in general, because aggressive reporting confers direct feedback about auditors. In contrast, the propensity to be too cautious in the strong-deterrent regime would be mitigated by reporting experience only to the extent that reporters test the waters by experimenting with aggressive reporting despite their underlying inclination to report cautiously. Because social projection theory implies that former auditors are less likely to be curious about other auditors, they will be less likely than professional reporters to experiment with aggressive reporting in the strong-deterrent regime, perpetuating any underlying tendency to report cautiously in that regime. Together, the different effects of prior experience in the weak- and strong-deterrent regimes combine to predict a greater difference in reporting behavior between these two regimes (that is, a larger own-payoff effect) among auditor-reporters than among professional reporters. We formalize this prediction as our second hypothesis:

H2: In experienced reporting behavior, the sensitivity to different reporting payoffs predicted in H1 will be more pronounced for auditor-reporters than for professional reporters.

3.3 Corroborating predictions

We direct two supporting hypotheses to corroborate the theoretical rationale underlying H2. First, to provide a corroborating test of different learning patterns among reporters due to the presence or absence of prior auditing experience, we examine the initial reporting behavior of both professional reporters and auditor-reporters. If auditor-reporters and professional reporters are equally able to adapt toward the mixed-strategy equilibrium as they gain reporting experience, then we should see little difference in the reporting trends of these two groups over their first several decisions as reporters. However, if auditor-reporters exhibit an own-payoff sensitivity that is more persistent than the initial own-payoff sensitivity exhibited by professional reporters, then we should see temporal evidence of this pattern, as we formalize in H3a:

H3a: Any initial sensitivity to different reporting payoffs among professional reporters will tend to dissipate over time, while auditor-reporters will remain more sensitive to different reporting payoffs.

Secondly, if auditor-reporters exhibit a more persistent own-payoff effect as reporters because they are influenced by their own prior experience as auditors, then we should see different degrees of equilibrium convergence by different kinds of former auditors when they become reporters in the strong-deterrent regime (which, according to the reasoning underlying H2, is the regime in which reporters are most likely to be sensitive to their prior audit experience). In particular, we expect reporters who were relatively diligent auditors to view experimenting with aggressive reporting in the strong-deterrent regime as being especially risky. This reasoning leads to the prediction of a more pronounced own-payoff sensitivity among former diligent auditors than among former lax auditors, as stated in H3b:

H3b: Sensitivity to different reporting payoffs among auditor-reporters will be more pronounced for those who chose the “diligent” option above the median frequency as former auditors than for those who chose the diligent option below the median frequency.

4 Method and design

4.1 Experimental participants, instructions, and role assignments

We recruited 96 volunteers from upper-division undergraduate accounting classes to participate in one of eight compensated research sessions, with 12 participants per session. Before beginning the experiment, one of the researchers read aloud an instructional handout that was distributed to all participants to keep throughout the session. Instructions informed participants that they would participate in a 90-min session consisting of three stages and in each stage would be assigned to be a blue player (analog to the reporter role), a green player (analog to the auditor), or to sit out. The blue/green terminology guarded against extraneous influences from

implied role playing (Haynes and Kachelmeier 1998), but we use the reporter/auditor terminology in this manuscript for clarity.

The instructions explained that each stage would consist of 16 periods, with random and anonymous pairings of reporters and auditors after each period. The anonymity and random pairings prevented opportunities for reputations or collusion, which are outside the scope of this research.

While participants did not know their role assignments for any given stage until notified (by computer) immediately before the first period of that stage, we predetermined these assignments to manipulate the effects of audit experience on subsequent reporting behavior in a *ceteris paribus* manner, as illustrated in Table 2. Specifically, each session had four “professional reporters,” four “auditor–reporters,” and four “professional auditors.” In the first stage, professional reporters develop experience by playing one of the bi-matrix games in Table 1 against auditor–reporters (as auditors), thereby conferring 16 periods of reporting experience to professional reporters and 16 periods of auditing experience to auditor–reporters. Note that professional auditors sit out in the first stage, which allows us to isolate the influence of the Stage 1 experience gained by professional reporters and auditor–reporters without any potentially confounding influence of Stage 1 on professional auditors.

Stages 2 and 3 of the experiment allow us to examine experienced reporting behavior. We implement two orderings of these stages to counterbalance against order effects. In the first ordering, professional reporters play the game against professional auditors in Stage 2 while auditor–reporters sit out, and auditor–reporters (as reporters) play against professional auditors in Stage 3, while professional reporters sit out. The second ordering reverses the sequence of these assignments (see Table 2), thus counterbalancing the design to remove any potential confounding influence of the experience gained by professional auditors from Stage 2 to Stage 3. In sum, role assignments provide both professional reporters and auditor–reporters with the same amount of experience in Stage 1, but as either reporters or as auditors. Then, in Stages 2 and 3, both groups play as reporters against the same group of “professional auditors” who sat out in Stage 1.

Table 2 Role-assignment scheme within each session

Stage	Professional reporters	Auditor–reporters	Professional auditors
Order variation 1			
1	Reporter	Auditor	Sit out
2	Reporter	Sit out	Auditor
3	Sit out	Reporter	Auditor
Order variation 2			
1	Reporter	Auditor	Sit out
2	Sit out	Reporter	Auditor
3	Reporter	Sit out	Auditor

4.2 Task

After describing the role assignments, the instructions continued with a description of the simultaneous-move game to be played each period. Participants were provided with a matrix of actions and payoffs identical to one of the two panels in Table 1 (depending on the treatment condition), except that the reporting and auditing terminology of Table 1 was replaced with generic terms (blue/green, up/down, and left/right), as previously discussed. Thus, the game is one of complete and common information, which (in theory) provides all participants with enough information to determine the mixed-strategy equilibrium.² Instructions explained in detail how to interpret the matrix, maximizing participant comprehension of the mapping from actions to payoffs.

4.3 Implementation and feedback

As soon as participants finished the instructions, the game itself was implemented on networked computers using z-Tree software (Fischbacher 2007).³ At the beginning of each period, a screen prompted each participant to click on one of two buttons, corresponding to the choices relevant to that participant's assigned role. After waiting for all participants to complete these choices, the computer followed up with a feedback screen, confirming the participant's choice and the payoff from that choice but not the payoff for the player with whom the participant was paired.

Although the own-payoff feedback described above does not directly inform participants of their counterparts' choices or payoffs, the mapping from point outcomes to the readily accessible payoff matrix is sufficient to infer both players' actions, with one important exception: choosing cautious reporting ("up" in the actual experiment) generates a constant payoff of 5, irrespective of the auditor's choice. As described earlier, this design feature is intentional, capturing both the underlying economics (namely, that cautious reporters are largely unaffected by different audit strategies) as well as the real-world inability of reporters to gain meaningful feedback about auditors' strategies unless there is something for auditors to detect. Thus, reporters must test the waters by reporting aggressively to learn auditors' strategies. While game theory alone would not predict an effect of this asymmetry (because the equilibrium can be determined from the payoff matrix), our more psychological premise is that, if one must report aggressively to learn about auditors, the propensity to do so will be jointly influenced by the consequences of detected aggressive reporting and by the nature of prior experience.

To facilitate participants' abilities to learn from their experience, we provided all participants with a "payoff summary," a form that directed them to write down their assigned role, the action they took in each period, and the corresponding payoff they

² Smith (1994) argues that in a strict game-theoretic sense, public announcements such as the matrix of payoffs we provide to all participants creates common information but not necessarily common knowledge, insofar as experimental participants cannot be entirely sure of how others will perceive and use the common information.

³ We are grateful to Urs Fischbacher for providing us with this software.

received. Thus, throughout the study, participants had access to both the payoff matrix and a cumulative list of their previous choices and payoffs.

4.4 Manipulations and compensation

We manipulate two factors in a 2×2 between-subjects design. The first factor, regime, manipulates between sessions whether participants play the weak-deterrent regime of Table 1, Panel A, or the strong-deterrent regime of Table 1, Panel B, differing only in the reporter's payoff for aggressive reporting that is detected by a diligent auditor (4 vs. 0, respectively). We conducted four sessions within each version, in random order. The second factor, experience type, manipulates whether reporters have prior experience as reporters (professional reporters) or as auditors (auditor-reporters). We operationalize this factor through the role-assignment scheme, as previously described in Section 4.1 and illustrated in Table 2.

Consistent with the traditions of experimental economics, we compensated participants based on outcomes. Instructions informed participants that their accumulated points would be converted to cash, using a linear conversion formula to result in average compensation of \$25.00 across sessions and a minimum of \$5.00. As promised, we followed up within a few days of the last session, distributing cash payments that ranged from \$5.00 to \$40.25, with an average of \$25.16. The experiment did not involve deception.

5 Results

Our primary focus is on reporting behavior in Stages 2 and 3 of the game, conditional on the nature of the experience gained during Stage 1. To construct independent observations of reporting behavior, we compute the percentage frequency with which each reporter chose the "aggressive" option. The reader can easily compute the frequencies of the "cautious" option as 100% less the "aggressive" frequencies. Accordingly, each professional reporter or auditor-reporter provides one observation for our analyses, consisting of that individual's percentage frequency of aggressive reporting across all 16 periods of Stage 2 or Stage 3, depending on ordering, as explained in Section 4.1 above. Table 3 reports descriptive statistics on these frequencies, along with the percentage frequencies of "diligent" auditing by professional auditors when facing professional reporters and when facing auditor-reporters in these same two stages. Figure 1 depicts the frequencies of aggressive reporting in Stages 2 and 3, providing an overall summary of our findings. Figure 1 also shows the mixed-strategy equilibrium frequency of aggressive reporting (66.7%) as a benchmark.

For our primary statistical tests of H1 and H2, we conduct an ANOVA with each reporter's percentage frequency of aggressive reporting in Stages 2 or 3 as the dependent variable and two between-participant independent factors, indicating whether the session employs the weak- or strong-deterrent version of the game (REGIME) and whether reporters gained experience in Stage 1 as a reporter or as an auditor (EXPERIENCE TYPE). Results are shown in Table 4 and discussed below.

Table 3 Descriptive statistics on behavior in Stages 2 and 3 (standard deviations in parentheses)

	Weak-deterrent regime	Strong-deterrent regime
Percentage frequency of “aggressive” by professional reporters	67.2% (28.3%)	60.2% (26.3%)
Percentage frequency of “aggressive” by auditor-reporters (as reporters)	76.2% (22.6%)	50.4% (26.0%)
Percentage frequency of “diligent” by professional auditors when facing professional reporters	65.2% (24.8%)	57.4% (32.5%)
Percentage frequency of “diligent” by professional auditors when facing auditor-reporters	71.5% (18.7%)	54.7% (31.3%)

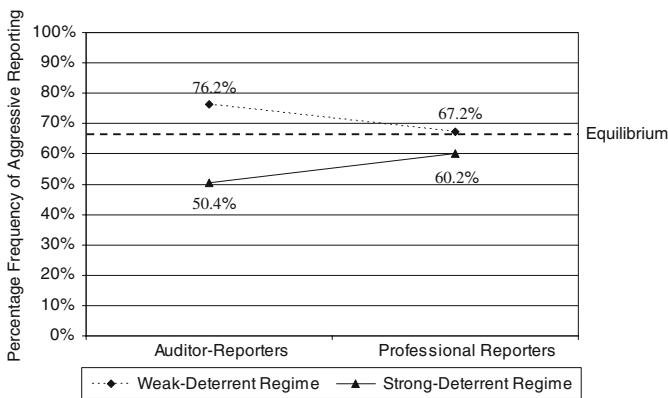


Fig. 1 Reporter behavior in Stages 2 and 3

Unless otherwise indicated, reported *p*-values are one-tailed, conditional on the hypothesized direction.

5.1 The own-payoff effect (H1)

Support for H1 comes from the significant ANOVA main effect for REGIME in Panel A of Table 4 ($F = 6.43; p = 0.007$). Pooling across both types of prior experience, reporters choose “aggressive” less often in the strong-deterrent regime (55.3%) than in the weak-deterrent regime (71.7%), notwithstanding the game-theoretic logic that the mixed-strategy equilibrium for reporters is identical in both regimes.

Interestingly, the behavior of the professional auditors who faced these experienced reporters would seem to justify some reaction to the lower payoffs for detected aggressive reporting in the strong-deterrent regime. While professional auditors tested less frequently in the strong-deterrent regime than in the weak-deterrent regime, the frequency of testing by professional auditors in the weak-deterrent regime is slightly below the mixed-strategy equilibrium testing frequency

Table 4 ANOVA on experienced reporting behavior to test H1 and H2

Factor	d.f.	SS	<i>F</i>	<i>p</i> -value
Panel A: overall ANOVA				
REGIME	1	0.4307	6.43	0.007
EXPERIENCE TYPE	1	0.0002	0.00	0.952
REGIME × EXPERIENCE TYPE	1	0.1406	2.10	0.076
Panel B: pairwise contrasts				
Effect of REGIME among auditor-reporters	1	0.5317	7.94	0.003
Effect of REGIME among professional reporters	1	0.0396	0.59	0.223

Dependent variable = Reporter's percentage frequency of "aggressive" in experienced behavior (Stages 2 and 3)

REGIME = Dichotomous factor to differentiate the weak-deterrent and strong-deterrent regimes for detected aggressive reporting (see Table 1)

EXPERIENCE TYPE = Dichotomous factor to differentiate professional reporters from auditor-reporters (see Table 2)

Reported *p*-values for directionally hypothesized predictions are one-tailed, as indicated by bold typeface

of 75%, while testing in the strong-deterrent regime is above the mixed-strategy equilibrium frequency of 37.5% (see Table 3). It would appear that professional auditors, like reporters, have difficulty internalizing their opponents' payoffs. Nevertheless, as predicted in H1, the behavior of reporters is consistent with own-payoff effects observed in other experiments such as Ochs (1995), Goeree and Holt (2001), and Goeree et al. (2003). We return to the implications of any off-equilibrium behavior by professional auditors shortly (see Subsection 5.2.2 below). For now, we turn to our more central question of how the differential sensitivity to reporting payoffs is influenced by different types of experience.

5.2 The moderating effect of experience (H2)

5.2.1 Experienced reporter behavior

Support for H2 comes from the interaction between REGIME and EXPERIENCE TYPE ($F = 2.10$; $p = 0.076$), as reported in Panel A of Table 4 and displayed in Fig. 1.⁴ While the significance level of this *p*-value is borderline, pairwise comparisons reported in Panel B of Table 4 corroborate the expectation underlying H2. Specifically, we find a statistically significant own-payoff effect among auditor-reporters ($F = 7.94$; $p = 0.003$) but not among professional reporters ($F = 0.59$; $p = 0.223$). The only group of experienced reporters whose behavior is statistically different (at $p < 0.10$) from the mixed-strategy equilibrium is the group of auditor-reporters in the strong-deterrent regime ($t = -2.51$; $p = 0.021$). A contrast-coded model (Buckless and Ravenscroft 1990) confirms that this group's reporting

⁴ For directional hypotheses, including directionally predicted interactions, we report one-tailed *p*-values. McNeil et al. (1996, pp. 137–139) discuss the rationale for one-tailed tests of directionally predicted interactions.

behavior is significantly less aggressive than the behavior reflected in an equally weighted composite of the other three groups ($F = 5.46$; $p = 0.011$).

The finding that off-equilibrium behavior is most pronounced among auditor-reporters in the strong-deterrent regime corroborates our theoretical reasoning in Section 3.2 that, while the propensity to report aggressively is likely to facilitate learning (and hence equilibrium convergence) among both professional reporters and auditor-reporters in the weak-deterrent regime, professional reporters are more likely than auditor-reporters to experiment with aggressive reporting in the strong-deterrent regime, where the underlying tendency is to report cautiously.

5.2.2 Influence of professional auditors and payoff implications

While the ANOVA in Table 4 indicates that auditor-reporters were more cautious in Stages 2 and 3 within the strong-deterrent regime than were professional reporters, it is also important to take into account the behavior of the professional auditors that these experienced reporters faced. As previously noted, professional auditors did not conform exactly to the different mixed-strategy equilibrium strategies in each regime (see Table 3), creating the possibility that the experienced reporters' behavior may to some extent simply reflect attempts to maximize expected payoffs by best responding to the actual (rather than equilibrium) play of professional auditors.

If professional auditors were to employ mixed-strategy equilibrium play, reporters' expected payoffs would (by definition) be insensitive to reporters' strategies because equilibrium play is designed to make the other party indifferent. Thus, to the extent that professional auditors employ strategies that are close to the mixed-strategy equilibria, we should observe little effect of different kinds of experience on reporters' *expected payoffs*—even if their *actions* were to differ significantly. Alternatively, if professional auditors test too little or too much, reporters' payoffs are maximized to the extent that they report aggressively or cautiously, respectively. This is the pattern we observe when we calculate expected payoffs using the data in Table 3. Within the weak-deterrent regime in which professional auditors tested slightly below the equilibrium level, professional reporters fare slightly better, earning an expected payoff of \$5.26, compared with \$5.11 for auditor-reporters. Conversely, within the strong-deterrent regime in which professional auditors tested above the equilibrium level but experienced reporters were more cautious (H1), especially among auditor-reporters (H2), we see the opposite result: professional reporters now earn an expected payoff of \$4.04, compared with \$4.31 for auditor-reporters.

The fact that auditor-reporters fare somewhat (though not significantly) better than professional reporters within the strong-deterrent regime suggests that support for H2 may partially reflect a best-response pattern to the off-equilibrium play of professional auditors, as opposed to the social projection learning model we set forth as the theoretical underpinning of H2. That is, within the strong-deterrent regime, an alternative explanation for our H2 result is that auditor-reporters are somehow *more* adaptive than professional reporters to the actual off-equilibrium

play of professional auditors. To address this possibility and corroborate our theoretical explanation for H2, we next explicitly test the learning patterns exhibited by reporters with both types of experience.⁵

5.3 Tests of corroborating hypotheses

5.3.1 Equilibrium convergence and learning (H3a)

H2 is grounded in the rationale that professional reporters and auditor–reporters experience different learning paths as reporters that influence their continued susceptibility to the own-payoff effect in experienced reporting behavior. It is not that prior experience as an auditor *creates* an own-payoff effect, but rather that audit experience *deters* the experimentation with aggressive reporting in the strong-deterrent regime that could mitigate that effect over time. If so, we should see evidence of different equilibrium convergence paths in the initial reporting behavior of professional reporters and auditor–reporters, as predicted in H3a.

Among professional reporters, we posit that participants will exhibit an own-payoff effect in the initial periods of Stage 1 but will converge towards equilibrium behavior in both the weak and strong regimes. This is exactly the pattern we observe, as depicted in Fig. 2, Panel A. A repeated-measures ANOVA reported in Table 5, Panel A, confirms a significant REGIME by TIME interaction ($F = 4.55$; $p = 0.021$). Follow-up contrasts (not tabulated) confirm that among professional reporters, the difference in reporting behavior attributable to REGIME is statistically significant only in the first half of Stage 1 ($F = 5.71$; $p = 0.012$), becoming negligible by the latter half of Stage 1 (Fig. 2, Panel A).

Turning to auditor–reporters, Panel B of Fig. 2 reveals that auditor–reporters begin their first eight periods as reporters (in Stage 2 or Stage 3) with a strong own-payoff effect similar to the initial Stage 1 behavior of professional reporters. Also like professional reporters, auditor–reporters appear to converge over time toward the mixed-strategy equilibrium within the weak-deterrent regime, but unlike professional reporters, auditor–reporters show little evidence of convergence toward equilibrium within the strong-deterrent regime, thereby perpetuating their own-payoff effect in that regime. Moreover, the stability over time evidenced by auditor–reporters in the strong-deterrent regime suggests that they are not simply learning how to respond to the above-equilibrium testing behavior of professional auditors. Consistent with the pattern suggested in Fig. 2, Panel B, a repeated-measures ANOVA (Table 5, Panel B) reveals that the only significant effect on reporting behavior among auditor–reporters is the main effect of REGIME ($F = 8.97$; $p = 0.003$). Follow-up contrasts (not tabulated) confirm that the predicted effect of

⁵ We also considered the possibility that professional auditors themselves might change over time, but this appears not to be the case. Our analyses show that professional auditors' behavior is relatively stable over Stages 2 and 3, bearing in mind that they sat out in Stage 1 while professional reporters and auditor–reporters gained their initial experience. Within the weak-deterrent regime, professional auditors chose diligent an average of 66.1% of the time in Stage 2 and 70.7% of the time in Stage 3. Within the strong-deterrent regime (the regime of primary theoretical interest to us), professional auditors chose diligent an average of 55.9% of the time in Stage 2 and a nearly identical 56.3% of the time in Stage 3.

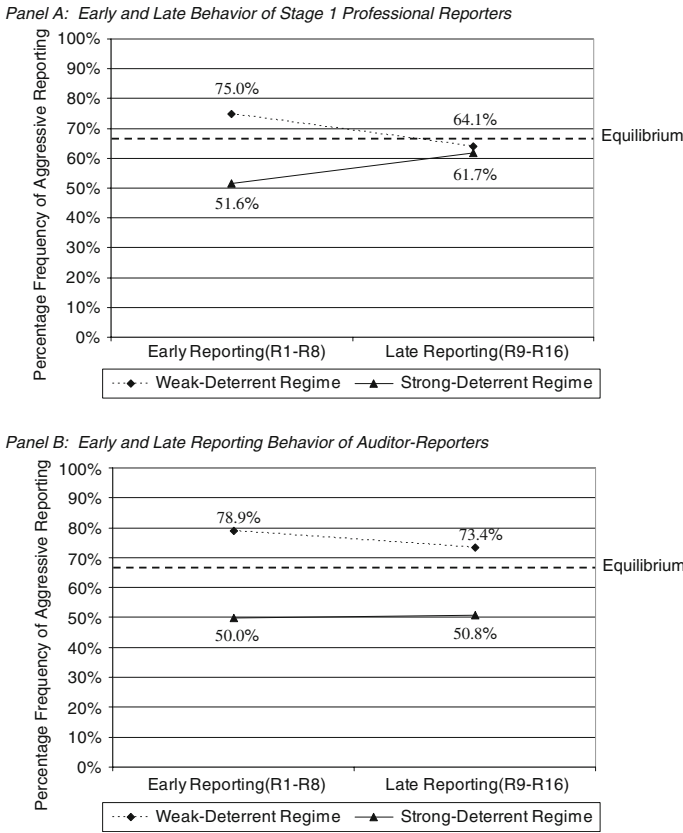


Fig. 2 Early and late behavior of first-time reporters

REGIME is significant in early rounds ($F = 13.74; p < 0.001$) as well as in later rounds ($F = 4.36; p = 0.023$).

To be sure, it is problematic to compare the reporting behavior of professional reporters in Stage 1 to the reporting behavior of auditor-reporters in Stages 2 and 3, but if anything, the experience that auditor-reporters gain as auditors in Stage 1 should provide them with *greater* opportunities to learn, and yet, consistent with H3a, we see a more persistent own-payoff effect among these individuals as reporters in Stages 2 and 3 than we see among professional reporters in Stage 1.

To provide additional evidence of differential learning among first-time reporters, we next regress the percentage frequency of aggressive reporting during the last eight periods of a reporter's first stage as a reporter (in other words, the late reporting behavior depicted in Fig. 2) on the auditor actions those reporters observed when reporting aggressively in their first eight periods as a reporter. Learning would be evidenced by a negative and statistically significant coefficient on detected aggressive reporting, indicating a tendency to report less aggressively when such reporting is detected (revealing that auditors are diligent) and to report more aggressively when aggressive reporting is not detected (revealing that auditors

Table 5 Repeated-measures ANOVA for first-time reporter behavior over time to test H3a

Factor	d.f.	SS	<i>F</i>	<i>p</i> -value
<i>Panel A: professional reporters</i>				
Between-participants	30	5.0210		
REGIME	1	0.2659	1.59	0.109
Within-participants	30	1.1733		
TIME	1	0.0002	0.01	0.938
REGIME × TIME	1	0.1780	4.55	0.021
<i>Panel B: auditor-reporters</i>				
Between-participants	30	3.5576		
REGIME	1	1.0635	8.97	0.003
Within-participants	30	0.7256		
TIME	1	0.0088	0.36	0.551
REGIME × TIME	1	0.0156	0.65	0.214

Dependent variable = Percentage frequency of “aggressive” for the first stage of reporting behavior (i.e., behavior of professional reporters in Stage 1 and behavior of auditor-reporters in Stages 2 and 3)
 REGIME = Dichotomous factor to differentiate the weak-deterrent and strong-deterrent regimes for detected aggressive reporting (see Table 1)

TIME = Dichotomous factor to differentiate whether the reporting behavior is averaged over the first or last 8 periods of the stage

Reported *p*-values for directionally hypothesized predictions are one-tailed, as indicated by bold typeface

are lax). As displayed in Table 6, this coefficient is indeed negative and significant for three of the four role-regime combinations but is not statistically distinguishable from zero for auditor-reporters in the strong-deterrent regime ($p = 0.118$). These results provide further evidence that an experiment-and-adapt strategy well characterizes the behavior of all reporters except auditor-reporters in the

Table 6 Regressions of late reporting behavior on observed auditing behavior conditional on regime and reporter type

	Weak-deterrent regime		Strong-deterrent regime	
	Professional reporters	Auditor-reporters	Professional reporters	Auditor-reporters
Coefficient (<i>p</i> -value)				
Intercept	1.28 (<0.001)	1.43 (0.001)	0.94 (<0.001)	0.83 (0.009)
Detected	-1.03 (0.011)	-0.93 (0.035)	-0.79 (0.005)	-0.47 (0.118)

This table reports regressions of late reporting behavior on previously observed audit behavior. Late reporting behavior (the dependent variable) is calculated as a reporter’s percentage of aggressive reporting during the last eight periods of reporting in Stages 2 or 3. “Detected” (the independent variable) is the percentage frequency of detected aggressive reporting that a reporter observed during the first 8 periods of Stages 2 or 3. Reported *p*-values for tests of the “detected” coefficient are one-tailed as signified by bold typeface, conditional on the expectation that detected aggressive reporting would lower the propensity to report aggressively

strong-deterrent regime and further lessens the likelihood that auditor-reporters in the strong regime are simply best responding to the off-equilibrium play of professional auditors. Rather, auditor-reporters in the strong-deterrent regime appear to be more persistent in their reporting behavior, presumably because they think that they already know something about how auditors behave and are therefore more reluctant to experiment with aggressive reporting in a high-risk environment. In contrast, professional reporters appear generally willing to test the waters—despite the cost of doing so in the strong-deterrent regime—and the success or failure of their initial aggressive reporting then plays a significant role in how they report later.

5.3.2 Conditioning on prior behavior as an auditor (H3b)

Our intention with H3b is to use data from auditor-reporters' Stage 1 behavior as auditors to provide additional evidence on the process by which the reporting behavior of auditor-reporters becomes "sticky." Drawing on social projection theory, we predict in H3b that the willingness of auditor-reporters to experiment with aggressive reporting in the strong-deterrent regime will be decreasing in the frequency with which they chose to audit diligently in their former role. To investigate this prediction, we split the auditor-reporter participants within the strong-deterrent and weak-deterrent regimes into two halves, depending on whether they chose "diligent" above or below the median frequency for each of these cells as auditors. This median split results in a dichotomous factor that we label "AUDITOR TYPE" for ANOVA analysis in Table 7. Descriptive statistics for auditor-reporters' behavior as reporters within each auditor type are depicted in Fig. 3.

Table 7 ANOVA on reporting choices of auditor-reporters conditional on own prior behavior as auditors to test H3b

Factor	d.f.	SS	F	p-value
Panel A: overall ANOVA				
REGIME	1	0.5317	9.72	0.002
AUDITOR TYPE	1	0.0313	0.57	0.456
REGIME × TYPE	1	0.2153	3.93	0.029
Panel B: pairwise contrasts				
Effect of REGIME among formerly diligent auditors	1	0.7119	13.01	< 0.001
Effect of REGIME among formerly lax auditors	1	0.0352	0.64	0.215

Dependent variable = Reporter's percentage frequency of "aggressive" in experienced behavior (Stages 2 and 3), using data from auditor-reporters only

REGIME = Dichotomous factor to differentiate the weak-deterrent and strong-deterrent regimes for detected aggressive reporting (see Table 1)

AUDITOR TYPE = Dichotomous factor to differentiate whether auditor-reporters tested below the median frequency in Stage 1 (formerly lax auditors) or above the median frequency in Stage 1 (formerly diligent auditors)

Reported p-values for directionally hypothesized predictions are one-tailed, as indicated by bold typeface

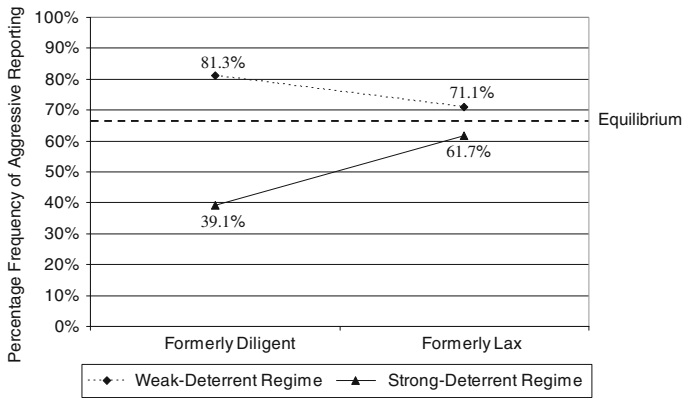


Fig. 3 Reporting choices by auditor-reporters in Stages 2 and 3 conditional on own prior behavior as auditors. In this graph, former diligent (lax) auditors are auditor-reporter participants who chose “diligent” in Stage 1 of the experiment above (below) the median frequency

Table 7, Panel A, indicates a significant interaction between REGIME and AUDITOR TYPE that is consistent with H3b ($F = 3.93$; $p = 0.029$). While the same direction of the own-payoff effect applies to auditor-reporters of both types, follow-up contrasts (Table 7, Panel B) indicate that the own-payoff sensitivity to REGIME is significant only among auditor-reporters who were formerly diligent auditors ($F = 13.01$; $p < 0.001$), not among reporters who were formerly lax auditors ($F = 0.64$; $p = 0.215$). As is apparent in Fig. 3, the primary driver of the REGIME effect among former diligent auditors is the 39.1% frequency of aggressive reporting among these individuals in the strong-deterrent regime, which is well below the predicted mixed-strategy equilibrium of 66.7%. When the risk of detected aggressive reporting was highest, former diligent auditors largely avoided that risk.

It might seem self-evident that diligent auditors would become cautious reporters in a strong-deterrent regime, simply reflecting natural variation in beliefs and risk preferences. However, given random assignment to treatment conditions, the population of “professional reporters” also included individuals who would have been diligent auditors *had they been given that opportunity*. What H3b shows in concert with earlier support for H2 and H3a is that the tendency to refrain from experimenting with aggressive reporting hinges not so much on one’s innate propensity to be a diligent auditor as on the experience of having actually audited diligently.

If the type of audit experience influences subsequent reporting behavior, a natural follow-up question is how auditors came to be relatively diligent or lax. To investigate this question, we investigate the reporting behavior that auditor-reporters faced in Stage 1 *as auditors*. Within both regimes, we find that diligent auditors encountered significantly more aggressive reporting than did their lax auditor counterparts ($F = 8.29$; $p = 0.004$). Simple effects verify that the difference between auditor types is significant in both regimes ($t_{Weak} = 2.22$; $p = 0.017$; $t_{Strong} = 2.59$;

$p = 0.008$). Thus, “diligent auditing” in both regimes is likely to be at least partly associated with having audited aggressive reporters.⁶

Although former diligent auditors tended to observe relatively aggressive reporters in both the strong- and weak-deterrent regimes when they were auditors, their behavior *as reporters* is no longer similar across regimes. Namely, former diligent auditors are significantly less likely than former lax auditors to report aggressively in the strong-deterrent regime ($p = 0.031$), while former diligent auditors are, if anything, *more* likely than former lax auditors to report aggressively in the weak-deterrent regime (although the difference is not statistically significant; two-tailed $p = 0.393$). Thus, although aggressive reporting appears to promote diligent auditing in both regimes, only in the strong-deterrent regime does this experience lead auditor-reporters to become more cautious when they become reporters.

It would appear that both the pattern of audit experience and a regime with relatively severe consequences of auditing lead diligent auditors to become cautious reporters. That said, we would not go so far as to suggest that observing aggressive reporting as a former auditor is the driving cause of our primary results. Indeed, if we split auditor-reporters on whether they observed above-median or below-median levels of aggressive reporting during their tenure as auditors (instead of splitting on the actual choices they made as auditors), the difference between auditor types within the strong-deterrent regime remains in the same direction but becomes much less pronounced and is no longer statistically significant ($p = 0.206$). We conclude that while aggressive reporting likely promotes diligent auditing, the more important causal construct for our findings is the experience of having been a diligent auditor, regardless of how one attains that experience.

6 Conclusions, implications, and limitations

The effectiveness of auditing in disciplining aggressive reporting depends in part on the extent to which reporters anticipate audit consequences when making their reporting decisions. In a bi-matrix laboratory experiment that captures key game-theoretic tensions between auditors and reporters, we find that reporters are significantly more sensitive to different consequences of detected aggressive reporting when they have previous experience in the auditor role of the game. That is, reporters with former audit experience display a greater spread in reporting behavior under two regimes with different consequences for detected aggressive reporting than do reporters with the same amount of experience gained solely as a reporter. Follow-up analysis indicates that the cautious reporting induced in the strong-deterrent regime is most persistent among reporters who were formerly diligent auditors.

To the extent that real-world auditing is characterized by similar strategic tensions, one implication of these results is that, if regulators propose new policies to curb aggressive reporting (such as Sarbanes-Oxley Section 404), those new

⁶ The differences in observed reporting behavior occurred primarily in the first eight periods of the stage. The effects of regime and auditor type are strongly associated with reporting behavior in those periods ($R^2 = 0.586$) but are only weakly associated with observed reporting behavior in the last eight periods of the stage ($R^2 = 0.067$).

policies are likely to be most effective among reporters who previously gained experience as diligent auditors. Corporate boards could also consider the effects of audit experience when considering which managers to hire for positions of reporting responsibility. Our results suggest that prior experience as a diligent auditor in combination with strong regulatory sanctions can potentially dissuade reporters from testing the waters of aggressive reporting behavior.

While an experimental design allows us to manipulate the likely effect of recent regulatory changes (Sarbanes-Oxley) on detected aggressive reporting in a *ceteris paribus* environment, any policy implications from this research must be conditioned by the fact that regulations such as Sarbanes-Oxley undoubtedly altered other payoffs besides the reporter's payoff for detected aggressive reporting that we examine in this study. For example, the Public Company Accounting Oversight Board, which has the authority to review and punish auditors for poor quality audits, could be interpreted as reducing the payoffs (or heightening the penalties) for lax auditing. Thus, in addition to any influence of their prior experience as auditors, contemporary reporters must also consider an audit environment that is likely more rigid than in years past. Future work could extend the present study by considering these and other variations in a strategic game, either in isolation or in combination with different penalties for misreporting.

In addition to the usual limits to which an abstract experiment can be generalized to real-world issues, our study has three particular limitations. First, our experimental design intentionally abstracts away from the independence issues that can surface when auditors assume employment with their former clients (Menon and Williams 2004; Lennox 2005). The reason we avoid these issues is that the vast majority of real-world reporting executives with previous audit experience do not assume employment with their audit clients (Imhoff 1978; Lennox 2005), motivating our interest in studying the more basic effects of audit experience when interactions between reporters and auditors are strategic but independent. Still, we cannot and do not claim that our results would extend to cases in which other studies have already demonstrated the potential impairment of independence when auditors and their clients are tied by prior affiliations. Our broader point is that those cases are only a subset of the extent to which auditors become reporters.

A second limitation is that our study does not investigate which types of auditors are most likely to become reporters. To the extent that we predict and find different consequences of audit experience among relatively diligent versus relatively lax former auditors, one is led to question which kinds of former auditors characterize the real-world population of reporters. We cannot speak to that question using an experimental design that randomly assigns participants to roles. To be sure, a randomized design confers the benefits of a *ceteris paribus* environment that controls for the potential for self-selection biases to present alternative explanations for our results. Still, we acknowledge that the implications of our study hinge on the types of auditors likely to become reporters.

A third limitation is that, although we use labels like "auditor," "reporter," "diligent," "lax," "aggressive," and "cautious" as an expository convenience in motivating and describing the study, the experimental participants played a neutrally labeled equivalent of this game with terms like "green," "blue," "left,"

“right,” “up,” and “down.” Consistent with the traditions of experimental economics (Haynes and Kachelmeier 1998), we used neutral labeling to separate the strategic predictions underlying our hypotheses from possible role-playing confounds that might otherwise affect what participants think auditors and reporters should do. Even with neutral labels, the bi-matrix game we consider captures key institutional features of auditor–reporter interactions. To see this, note that the payoffs lose their intuitive interpretations if the auditor and reporter labels are reversed, such that our game differs substantively from generic mixed-strategy games like “matching pennies.” Still, the potential sensitivity to labeling that motivated us to use neutral terminology also suggests certain professional, ethical, and other institutional elements of auditor–client interactions that our study does not address. We leave these issues to future research.

While the accounting literature includes several experimental studies of auditor–reporter interactions using experimental economic techniques, as reviewed by Callahan et al. (2006, §5.2), many important questions remain. Our study points to two areas that we believe warrant greater attention. First, an inherent feature of the auditor–reporter game we consider is *mixing* (that is, no pure-strategy equilibria), motivating consideration of behavioral phenomena such as the own-payoff effect that moderate the predictive accuracy of mixed-strategy equilibria (for another example, see Bloomfield 1997). Second, while most prior auditing research has focused on auditor behavior, we believe that it is also important to consider the effects of auditing and audit experience on *reporter* behavior. Both auditor and reporter decisions are pivotal to the role auditing plays in the financial reporting environment.

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