Users’ Judgments of Managers and Auditors:  
The Impact of Accounting Treatment and Reconciliation

Susan D. Krische  
Assistant Professor  
University of Illinois at Urbana-Champaign  
krische@uiuc.edu

Paula R. Sanders  
Doctoral Student  
University of Illinois at Urbana-Champaign  
psanders@uiuc.edu

Steven D. Smith  
Assistant Professor  
University of Illinois at Urbana-Champaign  
smithsd@uiuc.edu

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ABSTRACT

We examine how supplemental accounting disclosures affect users’ judgments about management credibility and, in turn, their expectations of the auditor. In a lease obligation setting, our experiment separates the effects of understanding the financial impact of accounting treatment (by manipulating the presence of a supplemental reconciliation relative to control conditions) from inferences made based on management’s choice of accounting disclosures (by manipulating the source of the reconciliation). Users who receive a reconciliation (of disclosed lease obligations to capitalization) report lower perceptions of management credibility, higher investment risk, and higher audit expectations when the reconciliation is provided by a source other than management. Results demonstrate the effects of the presence and source of reconciliation on investment risk and management credibility judgments, extending research on the influence of managerial reporting discretion to audit expectations, with implications for research on the expectation gap and on auditor business and litigation risk. These findings suggest boundary conditions in which audit expectations are higher (and, thus, auditors’ business and litigation risk may also be higher) for disclosed information than for recognized information.

Keywords: management credibility, perceived audit quality, expectation gap, recognition, disclosure, disaggregation, reconciliation

Data availability: contact the authors
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1. Introduction

We examine how supplemental accounting disclosures affect financial statement users’ perceptions of management credibility and their audit expectations. Management credibility, according to Mercer (2004, 2005), represents financial statement users’ beliefs about management’s overall level of trustworthiness or competence. Similarly, we define audit expectations as financial statement users’ beliefs about the overall level of skepticism or effort the auditor should apply in planning and performing the audit of management’s financial statements. We connect prior work on management credibility to users’ audit expectations because management trustworthiness and competence are also key components of a company’s control environment, or “tone at the top,” which are considered critical to audit planning (COSO 1994; AICPA 2006). With research in psychology suggesting that individuals expect their beliefs and concerns to be shared by others (e.g., Keysar et al. 1995), we conjecture that financial statement users likely expect the company’s auditors to share their beliefs about management credibility and to accordingly adjust their overall skepticism or effort in performing the audit.

Much of the prior literature on credibility has focused on disclosure credibility, defined by Mercer (2004) as financial statement users’ beliefs about the believability of a particular disclosure. While management credibility can affect disclosure credibility, prior research has also documented that aspects of disclosure credibility (e.g., completeness—Mercer 2005; timing — Libby and Tan 1999; accuracy —Tan et al. 2002) impact users’ perceptions of management credibility, at least in the short term.

Disclosure credibility varies (and hence may impact perceptions of management credibility) more when a disclosure is voluntary (i.e., not mandated by generally accepted accounting principles, GAAP) or even in accordance with GAAP if users believe that substantial discretion remains in the application of accounting treatments (Hodge et al. 2006). However, standards reinforcing auditors’ obligations to consider the overall quality of a company's accounting principles beyond mere compliance are relatively recent (e.g., SAS No. 90). There are currently no objective criteria for the consistent evaluation of quality
(AICPA 1999; Munter 2001), with little professional guidance on how auditors should adjust for corporate governance factors when formulating an appropriate audit strategy (Cohen et al. 2002). Thus, users and auditors may reasonably differ in the management credibility assessments they make based on such disclosures.

In this paper, we integrate the extant financial accounting literature on investors’ perceptions of disclosure and management credibility with recent research on the effects of alternative accounting treatments on auditors’ judgments of tolerable misstatement and materiality. For both stock option compensation and lease obligations, Libby et al. (2006) find that audit partners tolerate more misstatement in disclosed rather than recognized financial statement items. They find that the differences in tolerable misstatement occur at least in part because auditors view misstatements in disclosed amounts to be less material. This viewpoint may arise because of lower perceived litigation risk, with auditors expecting users to place lower weight on disclosed information. However, in a similar lease obligation setting, Nelson and Tayler (2007) find that relatively sophisticated financial statement users weight lease information more heavily when it is initially disclosed but they then adjust (or reconcile) the financials to appear as if the leases had been recognized, as compared to when the leases are simply recognized in the financial statements. Nelson and Tayler (2007) also provide preliminary evidence that users who are presented with that reconciliation perceive management as relatively less credible than users presented only with recognition. This preliminary finding is consistent with reconciliation highlighting the financial impact of the difference in accounting treatments for users, who may then perceive management as less forthcoming despite conforming with GAAP. However, open questions remain about the circumstances under which users will weight disclosed information more heavily because of inferred differences in management credibility, and to what extent those inferences have implications for users’ audit expectations.

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1 That expectation is consistent with prior evidence that investors are less affected by disclosed rather than recognized information. This general finding has now been documented with respect to the recognition versus disclosure of leases (e.g., Imhoff et al. 1993, Munter and Ratcliffe 1983, Wilkins and Zimmer 1983b), post retirement benefits (e.g., Davis-Friday et al. 2004, Harper et al. 1987), real estate asset revaluations (e.g., Cotter and Zimmer 2003), stock option compensation (Belzile et al. 2006, Frederickson et al. 2006), research and development (Entwistle 1999), and fair value income (Hirst et al. 2004).
The lease obligation setting examined by Libby et al. (2006) and Nelson and Tayler (2007) is well-suited to our experimental investigation of users’ judgments about management credibility and their related audit expectations for several reasons. With lease obligations, management generally has incentives to prefer the off-balance sheet disclosure of operating leases over the recognition of capital leases, and prior research has found that incentives play an important role in credibility assessments (e.g., Hirst et al. 1995; Hodge et al. 2006). Managers are also more likely to attempt earnings management by structuring transactions around precise standards (such as the specific thresholds stated in SFAS No. 13 with respect to operating versus capital leases), and auditors are less likely to adjust such attempts (Nelson et al. 2002). Thus, current GAAP would appear to be restrictive, but managers retain some flexibility to choose between accounting treatments (albeit at a cost of structuring the transaction). In contrast, the recognition of all leases is generally preferred by sophisticated users (e.g., SEC 2005, S&P 2006), although the difficulty of the constructive capitalization adjustment implies that only relatively knowledgeable users are likely to make the attempt (as in Nelson and Tayler 2007). In our experiment, we separate the effects of users’ understanding of the financial impact of the accounting treatment (by manipulating the presence of a supplemental reconciliation relative to control conditions) from the inferences users might make based on management’s choice of accounting treatment and disclosures (by manipulating the stated source of the reconciliation).

More specifically, in our experiment, we vary the financial disclosures for a company’s operating lease obligations. In two treatment conditions, participants receive a supplemental reconciliation indicating the company’s financial results as if the disclosed operating leases had instead been capitalized, with the source of the reconciliation manipulated between-subjects to be either company management or an independent research analyst. We also include two between-subjects control conditions—a disclosure condition, which is identical except that participants do not receive the reconciliation, and a recognition condition, in which the company maintains capital leases instead of operating leases. Our dependent measures include management credibility, investment risk, and audit expectation judgments. We ask all participants to evaluate each of the three dependent measures in order to facilitate mediation analyses. To
provide corroborating evidence with alternative measures, we also analyze participants’ responses to post-task questions about their credibility assessments and the auditor’s responsibilities.

We hypothesize and find that participants who receive a reconciliation of the disclosed lease obligations to capitalization report lower management credibility, higher investment risk, and higher audit expectations when the reconciliation is provided by an outside source rather than by company management. We apply a path analysis to simultaneously estimate the predicted direct and indirect relationships among the variables; we find results consistent with our hypotheses and with management credibility mediating the observed investment risk and audit expectations effects.

Comparisons with the control conditions confirm that disclosed information alone tends to affect judgments less than recognized information, supporting a key assumption for the conclusion that audit litigation risk is generally lower for disclosed amounts (Libby et al. 2006). Users are unlikely to differ in their views of management credibility or in their audit expectations unless prompted to do so (in our experiment, via reconciliation), again consistent with generally lower audit litigation risk. However, users receiving a reconciliation from an outside source report lower perceptions of management credibility, higher investment risk, and higher audit expectations relative to control conditions, consistent with Nelson and Tayler’s (2007) evidence. These findings suggest boundary conditions in which audit expectations are higher (and, thus, auditors’ litigation risk may also be higher) for disclosed information than for recognized information.

Our research extends several lines of current literature. First, we extend research on recognition versus disclosure by demonstrating the effects of the presence and source of reconciliation on investment risk and management credibility judgments. The results indicate the differential impact of legitimate, within-GAAP accounting treatment choices on users’ judgements when those choices are salient. These effects could, at least in short term evaluations, offset the potential benefits of managing earnings or debt information.

Second, we extend research on the influence of managerial reporting discretion on expectations of auditors’ planning and performance. Our results confirm management credibility as a relevant control
feature which affects users’ audit expectations. Users expect auditors to share their concerns about how financial reporting decisions reflect on the integrity of management and to accordingly adjust their efforts. With the recent public concerns over auditors’ potential conflicts of interest in responding to management pressures (e.g., Moore et al. 2006), these results provide empirical evidence that an auditor’s business risk is likely to change with users’ perceptions of management credibility. Auditors may need to assess managers’ disclosures not only based on their conformity with GAAP, but also based on how those disclosure decisions may be perceived by financial statement users who generate audit expectations based on their assessments of managers’ trustworthiness.

Finally, we extend research on the expectation gap and auditors’ litigation risk as it relates to the standard of care that should be observed for recognized versus disclosed amounts. Because disclosed amounts are typically given less attention than recognized amounts, auditors may act as if the litigation risk associated with them is generally lower (Libby et al. 2006). Our results suggest boundary conditions: through the effect of reconciliation on management credibility judgments, users’ expectations of auditor diligence (and thus auditors’ exposure to risk) may be higher for disclosed versus recognized amounts, even though management’s choices conform to GAAP. As Mock and Wright (1999) and Allen et al. (2006) note, the extant research suggests that auditors are sensitive to client risk factors, but finds mixed results with respect to whether audit program plans are then adapted to those risks. Unless auditors also take other offsetting actions, greater tolerance for misstatements in disclosed information could be a more risky strategy than realized.

The remainder of the paper proceeds as follows. Section 2 develops the hypotheses. Sections 3 and 4 describe the experimental method and results, respectively. Section 5 summarizes and discusses implications and directions for future research.

2. Background and Hypothesis Development

Because we place our investigation of management credibility within the context of prior research on disclosure, recognition, and reconciliation of lease obligations, we begin with a brief review of the
background literature in that setting. We then discuss prior research on management credibility and develop our hypotheses.

2.1 DISCLOSURE, RECOGNITION, AND RECONCILIATION OF LEASE OBLIGATIONS

Prior research on management’s choice to recognize or disclose accounting information when both are acceptable under GAAP has focused on investment implications, primarily for capital market participants and to a lesser extent for creditors or lenders. With few exceptions (e.g., Libby et al. 2006), the impact beyond the immediate investment setting has been largely ignored, despite the likely ramifications for others, especially auditors.

Current GAAP differentiates between capital and operating leases (SFAS No. 13; IAS 17), but standard setters (IASC 2000), regulators (SEC 2005), and sophisticated users (e.g., Imhoff et al. 1991; Revsine et al. 2002; Houlihan and Sondhi 1984; Standard & Poor’s 2006) have indicated they believe all leases should be effectively capitalized (see also Nelson and Tayler 2007). Because the risk of investing in a company increases with the level of its debt (e.g., Piotroski 2000), users’ perceptions of the risk of investing in a company should therefore increase with the amount of lease obligations.

Supplemental disclosure of minimum future lease payments allows users to approximate the balance sheet and income statement as if operating leases had been recognized. However, this “constructive capitalization” adjustment is a reasonably difficult one that only relatively sophisticated users are likely to attempt spontaneously. Moreover, the effort and attention required also reduces the likelihood that users will attempt the adjustment (Bloomfield 2002; Hirshleifer and Teoh 2003; Hirst et al. 2003; Hunton et al. 2006). Consistent with these lines of reasoning, prior research provides evidence that recognized information has a stronger influence on investors’ judgments and decisions than does disclosed information. For example, investors are more likely to view obligations as a form of debt if

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they are recognized than if they are disclosed (Harper et al. 1987, 1991; Gopakakrishnan and Parkash 1996), leading investors to be more likely to invest in a company that has lower recognized debt (Munter and Ratcliffe 1983). Similarly, bank analysts’ risk assessments are affected more by recognized information than by disclosed information (Hirst et al. 2004). Thus, even though knowledgeable users have clearly stated their preference for capitalization, financial statement users in general are less likely to consider a higher debt basis and assess higher investment risk when debts such as lease obligations are merely disclosed.

Consistent with investors’ greater focus on recognized amounts, Libby et al. (2006) find that auditors are willing to allow more misstatements in disclosed amounts than in recognized amounts. Specifically, they examine audit partners’ decisions regarding how much of an understatement in stock compensation expense or lease obligations should be corrected, finding that partners knowingly require fewer corrections when items are disclosed rather than recognized. The auditors’ differential treatment may be a rational response to differences in the risk of litigation and reputation loss (Libby et al. 2006, 535). If financial market participants place less weight on disclosed information than on recognized information, auditors may appropriately perceive lower risk in disclosed amounts than in recognized amounts, establishing higher materiality levels and tolerating greater levels of misstatement.

Nelson and Tayler (2007) find that knowledgeable users can weight disclosed lease obligations more heavily than recognized information, indicating potential circumstances under which that reasoning may not be appropriate. Specifically, users in their experiment were experienced enough to understand and apply the constructive capitalization adjustment to the company’s disclosed lease obligations, and

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3 Auditors’ willingness to tolerate misstatement likely varies with the perceived risk and exposure of the financial item. However, in their field investigation of audit analytical procedures, Hirst and Koonce (1996) indicate that lease commitments would be a higher-risk, higher-exposure item, which suggests that auditors should be less willing to tolerate misstatement in lease obligations than in other potential settings. Specifically, Hirst and Koonce (1996) note that the amount of evidence that the auditor gathers to corroborate an explanation of an analytical procedure used for substantive testing purposes would likely vary: “Seven [of 19] auditors noted that if the area is not one of critical audit importance, less corroboration may be sought. For example, corroboration is less likely to be obtained for an unexpected difference in a low-risk, low-exposure account (e.g., prepaid insurance) than for a high-risk, high-exposure account (e.g., lease commitments)” (Hirst and Koonce 1996, 473, emphasis added).
they either prepared their own reconciliation or received an experimenter-prepared reconciliation of the lease footnote disclosure to capitalization. Both procedures involve a reconciliation from a source independent of company management (i.e., the participant’s own efforts or the experimenter). If users do not give reduced weight to disclosed information (e.g., when they prepare their own reconciliation or an explicit reconciliation becomes available), then the assumption of lower litigation risk may not hold. Further, if lower assessments of management credibility lead users to increase their expectations of the skepticism and effort to be applied by the company’s auditor, the business risk associated with disclosed amounts could increase relative to recognized amounts.

In our experiment, we separate the effects of users’ understanding of the financial impact of the accounting treatment from the credibility inferences users might make based on management’s choice of accounting treatment and disclosures. Elliott (2006) investigates the effect of a voluntary management-provided reconciliation in a different context, from pro forma earnings to GAAP earnings when pro forma earnings were emphasized by management. Because pro forma earnings are higher than GAAP earnings, providing a reconciliation acts against management’s typical incentives. Although not hypothesized as such, consistent with the credibility literature we discuss below, Elliott finds that the management-provided reconciliation leads financial analysts to view pro forma earnings as more reliable and to increase their weighting of pro forma earnings when judging earnings performance. For nonprofessional participants, Elliott finds that the reconciliation reduces the influence of pro forma earnings on users’ earnings performance judgments, with no significant difference in perceived reliability. These results suggest that a voluntary management-provided reconciliation of alternative accounting treatments can affect users’ perceptions of credibility, contingent on their level of sophistication.4 As such, we assess the

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4 Similar results have been found with respect to the voluntary disaggregation of (forward-looking) management forecasts, when increasing disclosure transparency conflicts with management’s incentives (Hirst et al. 2007; Hutton et al. 2003). Mandatory management-provided reconciliations for alternative accounting treatments have also been investigated (e.g., Hirst et al. 2003, with reconciliation of prior-year accrual estimates to actual realizations; Maroney and Ó hÓgartaigh 2005, with 20-F reconciliation from foreign to US GAAP), but with mixed results. However, other than Elliott (2006), the prior research does not take into account the potential impact of differences in users’ knowledge.
effects of users’ understanding of the financial impact of the accounting treatment separately from the credibility inferences users might make based on management’s choice of accounting treatment and disclosures.

2.2 MANAGEMENT CREDIBILITY

As Mercer (2004, 186) notes, much of the financial accounting literature has focused on “disclosure credibility,” often treating it synonymously with “management credibility.” Reviews by Mercer (2004) and Hirst et al. (2006) suggest that the credibility of a company’s particular disclosures varies with a number of potential factors, including management’s situational incentives at the time of the disclosure, various characteristics of the disclosure itself (e.g., its precision, venue, timing, completeness, and inherent plausibility), the degree of external and internal assurance available, and the existing overall level of “management credibility,” representing financial statement users’ beliefs about management’s trustworthiness or competence. Similar to Mercer’s definition, Birnbaum and Stegner (1979) define source credibility in terms of perceptions of source bias and source expertise.

Prior research has also documented that some aspects of disclosure credibility (e.g., completeness —Mercer 2005; timing — Libby and Tan 1999; accuracy —Tan et al. 2002, Williams 1996) impact users’ perceptions of management credibility, at least in the short term. We focus on situational incentives, and posit that perceptions of management credibility (particularly, perceptions of management trustworthiness) would also be affected. Hirst et al. (1995) find that financial statement users perceive incentive-consistent information as less credible than incentive-inconsistent information. Extending this finding, Hodge et al. (2006) document that users’ assessments of the credibility of management’s classification choices rely less (more) on the consistency with management’s reporting incentives in a mandated (discretionary) reporting environment. Hodge et al. (2006) also show that users’ assessments of the credibility of management’s classification choices rely less (more) on consistency with management’s reporting incentives when management has already established a good (poor) reporting reputation.

Persuasion models developed in psychology and accounting indicate that perceived situational incentives influence both disclosure credibility (Mercer 2004) and management credibility (Mercer 2005).
People attribute an incentive-consistent message to the source’s incentives, but attribute an incentive-inconsistent message to the source’s underlying beliefs (e.g., Kelley 1972). Therefore, disclosures consistent with management incentives are less likely to be believed (Mercer 2004), and management credibility assessments increase when management is forthcoming about negative news relative to when management is not forthcoming (Mercer 2005).

Thus, when a supplemental disclosure acts against management’s incentives (e.g., a reconciliation that transforms disclosed lease obligations to appear as if recognized), we expect users to perceive higher management credibility when management provides that additional information (similar to Hirst et al. 2007 in the context of disaggregating management forecasts), but lower management credibility when users are aware that management has not provided them with that useful information (similar to Nelson and Tayler 2007). We argue that when management provides the reconciliation, users are more likely to perceive management as being forthcoming and honest. In contrast, when it becomes salient that management has opted not to provide that information (e.g., when users have enough knowledge to prepare their own reconciliation, or when they receive the reconciliation from an outside source), users are less likely to perceive management as forthcoming and honest. Therefore, users’ assessments of management credibility will be lower when a source other than company management provides the reconciliation.

**H1:** When an independent source provides users with a supplemental reconciliation transforming disclosed lease obligations to appear as if recognized, users will perceive lower management credibility than when the same reconciliation is provided by management.

We formally state our hypothesis relative to the situation in which management has opted to provide the information in order to control for users’ understanding of the financial impact of the accounting treatment. Recognition of lease obligations in the financial statements is also inconsistent with management’s typical incentives, but we do not anticipate a similar influence on management credibility assessments. When information is omitted, individuals are unlikely to fully appreciate how

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5 The positive effect of providing the reconciliation would be offset to the extent that users are also prompted to question why management did not simply recognize the lease obligations in the financial statements, instead of merely offering a supplemental disclosure. The direction of the resulting net effect is therefore uncertain.
much is left out and overestimate the exhaustiveness of the analysis (Fischhoff et al. 1978). Thus, between the recognition and disclosure control conditions, we anticipate that our participants will generally not recognize that information (i.e., reconciliation from disclosure to recognition) is missing, will be unlikely to realize a constructive capitalization adjustment would have been worthwhile, and thus will provide similar management credibility ratings.

2.3 MANAGEMENT CREDIBILITY CONSEQUENCES

2.3.1 Investment risk. Prior accounting research has documented that management’s disclosure policy can have a substantial impact on financial statement users’ expectations for a company’s cost of equity capital and stock price (Healy et al. 1999; see also Bloomfield and Wilks 2000) and cost of debt (Sengupta 1998), independent of country-specific factors (Francis et al. 2005). Analysts’ perceptions of corporate disclosure practices tend to be higher for companies that are larger, have better financial performance, and have recent or upcoming security issuances (Lang and Lundholm 1993). Companies for which analysts have higher perceptions of corporate disclosure also enjoy a larger analyst following, with more accurate analyst earnings forecasts, less dispersion among individual analyst forecasts, and less volatility in forecast revisions (Lang and Lundholm 1996). Therefore, if the presentation of a supplemental reconciliation that transforms disclosed lease obligations to appear as if recognized leads users to consider management incentives and affects perceptions of management credibility, we should also observe that users’ assessments of investment risk are higher when an independent source provides the reconciliation.

**H2:** When an independent source provides users with a supplemental reconciliation transforming disclosed lease obligations to appear as if recognized, users will perceive higher investment risk than when the same reconciliation is provided by management.

Support for H2 would be consistent with Nelson and Tayler’s (2007) finding that knowledgeable users weight disclosed information *more* heavily than recognized information when they either prepared their own reconciliation or received an experimenter-prepared reconciliation. We again formally state our hypothesis relative to a situation in which management has opted to provide that same information in order to control for users’ understanding of the financial impact of the accounting treatment. As
discussed previously, although the disclosure of minimum future lease payments allows users to approximate the balance sheet and income statement as if operating leases had been recognized, the “constructive capitalization” adjustment is reasonably difficult and effortful, such that only relatively sophisticated users are likely to attempt it spontaneously. Even though sophisticated users have clearly stated their preference for recognition, financial statement users in general are more likely to consider a higher debt basis and assess higher investment risk when debts such as lease obligations are recognized rather than merely disclosed. Therefore, we anticipate that our participants will generally not attempt the constructive capitalization adjustment, and will report higher risk assessments when lease obligations are recognized rather than merely disclosed. However, unlike the experimental treatment conditions, the increased risk assessments would not be mediated by users’ perceptions of management credibility.

2.3.2 Audit expectations. The National Commission on Fraudulent Financial Reporting (Treadway Commission 1987, 32) asserts that “the tone set by top management—the corporate environment or culture within which financial reporting occurs—is the most important factor contributing to the integrity of the financial reporting process.” Consistent with its recommendations, assessments of the control environment and “tone at the top” remain critical for the auditor (e.g., COSO 1994; AICPA 2006). Although the existence of an audit “expectation gap” is long established (e.g., Cohen Commission 1978; Libby 1979), relatively little research has looked at the interactions between auditors and the expectations of financial statement users beyond the wording or format of the audit report, perceived auditor independence (especially with respect to non-audit services), and litigation-related issues involving ambiguity, hindsight bias, or expert-witness testimony (see Nelson and Tan 2005, and Trotman 2005, for relevant discussions). However, Mercer (2004, 185) argues that “investors’ concerns about disclosure credibility appear to be increasing, as high-profile financial scandals such as Enron and WorldCom have shaken investor confidence in the trustworthiness of financial disclosures (Barrett 2002).”

We posit that users’ perceptions of management credibility will be mirrored in their expectations of the company’s auditor. Although the standard of care expected of the auditor should be assessed based
on *ex ante* factors in evaluating the sufficiency of audit work, this does not always occur. For example, jurors may assess higher standards of care for the auditor when the *ex post* consequences of an audit failure are severe (Kadous 2000). A similar concern is applicable in our setting. Transactions can be structured so as to allow different accounting treatments under GAAP (Abdel-khalik 1981; Imhoff et al. 1991; see also Nelson et al. 2002), and reconciliations are not required in this setting. Nevertheless, because of their effects on users’ perceptions of management credibility, similar effects may be observed in users’ audit expectations.

In other words, if users have *ex post* concerns about management credibility and integrity, they may expect auditors to have shared those concerns *ex ante* and to have planned their audit work accordingly. Psychology research suggests that people tend to overestimate the commonality of their own knowledge and beliefs (Nickerson et al. 1987; Keysar et al. 1995; Van Boven et al. 2003; see Marks and Miller 1987 for a review of the false consensus effect). Thus, we examine whether users’ judgments of management credibility extend to their expectations for the auditor.

**H3:** *When an independent source provides users with a supplemental reconciliation transforming disclosed lease obligations to appear as if recognized, users will report higher audit expectations than when the same reconciliation is provided by management.*

Because we anticipate that, without reconciliation, users will provide similar management credibility ratings between the disclosure and recognition control conditions, we also anticipate that users will report similar audit expectations between the two control conditions. In addition to the tests of our specific hypotheses, our analyses examine the simultaneous links between management credibility, investment risk, and audit expectations.

3. **Experiment**

3.1 **Participants**

Participants are undergraduate students recruited from a junior-level managerial accounting course at a large public university who completed the study for extra course credit. Participants attended
one of fifteen experimental sessions, and were randomly assigned to the between-subject conditions within each session.

Although enrolled in a junior-level accounting course, our participants were recruited early in the fall semester and would therefore still have relatively limited accounting experience. Because of our interest in audit expectation differences, we purposefully recruited participants with limited task-specific knowledge. Prior research finds that students’ judgments and decisions are similar to those of potential jurors (e.g., Bornstein and Rajki 1994, Zickafoose and Bornstein 1999),\(^6\) which suggests that candidates for jury service would generally be less financially sophisticated than Nelson and Tayler’s (2007) MBA participants.\(^7\) On the other hand, Frank et al. (2001) found that students nearing completion of an undergraduate auditing class share similar attitudes about the expectation gap as practicing auditors. Similarly, Monroe and Woodliff (1993) and Gramling et al. (1996) found that the completion of an auditing class significantly shifts students’ responses about audit expectations issues closer to those of practicing auditors, though differences may still exist. At this stage of their studies, our participants would not yet be enrolled in an auditing class, but it remains possible that such views could develop earlier in their studies or be intrinsic to accounting students. However, the extent to which our participants are more knowledgeable or share more sophisticated financial views should bias against finding our predicted pattern of audit expectations.

3.2 METHOD

3.2.1 Design. We adapt Nelson and Tayler’s (2007) materials to a \((1 \times 2) + 2\) between subjects design, manipulating the financial disclosures for a company’s leases. In our \((1 \times 2)\) experimental treatment conditions, the company maintains operating leases, and we manipulate the source of a

\(^6\) As discussed by Kadous (2000, 330-331), although individual judgments may be more representative of juror predeliberation evaluations of auditors, there is a strong, straightforward relationship between juror pre-deliberations or first-ballot results and the jury’s ultimate decision (Davis 1980).

\(^7\) Although judges may be considered more knowledgeable than individual jury members, they can also fall prey to judgment and decision-making fallacies (e.g., Guthrie et al. 2001). Further, even judicial opinions in securities fraud class actions are arguably consistent with the application of heuristic decision making processes (Bainbridge and Gulati 2002).
reconciliation of the lease footnote disclosure to constructive capitalization. Specifically, participants
initially receive the company’s financial information, including footnote disclosure of the operating
leases. Participants later receive a supplemental reconciliation indicating what the company’s financial
results would have been if the disclosed operating leases had instead been capitalized in the financial
statements. The source of the reconciliation is manipulated to be either (1) an independent research
analyst, or (2) company management. We complement our two experimental treatment conditions with
two control conditions in which participants do not receive any supplemental reconciliation. In the first
control condition, participants only receive the company’s financial information, which includes footnote
disclosure of the operating leases; we refer to this as the disclosure control group. In the second control
condition, participants only receive the company’s financial information, but the company has maintained
capital leases (which are recognized in the financial statements) instead of operating leases (which are
merely disclosed in the footnotes); we refer to this as the recognition control group. In all experimental
treatment and control conditions, the lease footnote provides identical information, sufficient for
knowledgeable users to constructively capitalize the operating leases (or reverse the recognition of capital
leases, if they wish to do so).8

3.2.2 Dependent measures. Our dependent measures include management credibility,
investment risk, and audit expectation judgments. We ask all participants to evaluate each of the three
dependent measures in order to facilitate mediation analyses.9 Participants assess the dependent measures
on 11-point Likert scales. Specifically, participants assess investment risk (i.e., how the risk of investing
in the company’s long-term debt compares to the industry in general) using a response scale anchored at 0
(much less risk than average) and 100 (much more risk than average), scored in 10-point increments.
Similarly, participants assess management credibility (i.e., how credible (trustworthy or believable)

8 As expected, however, our review of the completed experimental materials found no written documentation of any
participant attempting to perform this reconciliation.
9 Dependent measures were presented to participants in a single order (investment risk, management credibility, then
audit expectations). We collect additional data to assess the potential effect of asking participants about management
credibility immediately prior to reporting their audit expectations, and discuss this issue further in Section 4.4.
management is likely to be compared to the management of other companies in the industry) using a response scale anchored at 0 (much less credible than average) and 100 (much more credible than average). Finally, participants assess their level of concern that the financial statements contain potential material misstatements both (1) overall, and (2) with respect to the leases held by the company, using response scales anchored at 0 (much less risk than average) and 100 (much more risk than average). We use the mean of these two judgments as our measure of participants’ audit expectations. For ease of interpretation, we divide by 100 and present all dependent measures on a percentage basis.

Participants provide both initial and revised assessments of each of the dependent measures. Participants provide their initial assessments after first viewing excerpts from the company’s financial statements, which include footnote disclosure of the lease information. Participants provide revised assessments after being asked to review a duplicate of the initial financial information and, if applicable, the supplemental reconciliation. Similar to Hirst et al. (1999) and Sedor (2002), we adjust for the influence of participants’ initial response using analysis of covariance (ANCOVA) and examine the least squares adjusted means for participants’ revised responses.

To provide corroborating evidence with alternative measures, we also analyze participants’ responses to post-task questions about their credibility assessments and the auditor’s responsibilities. Birnbaum and Stegner (1979) define credibility in terms of perceptions of source expertise and source bias. Consistent with this characterization, Mercer (2001, 2005) includes measures of both management competence and management trustworthiness in evaluating overall management credibility. In our post-

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10 Specifically, participants were instructed that, when evaluating a company’s financial statements, “auditors need to assess the risk (called audit risk) that the financial statements contain material misstatements that they [the auditors] might fail to detect” and that “such misstatements could occur through either error (which is unintentional) or fraud (which is intentional) on the part of the company.” Although we generically label this as ‘audit risk’ in the materials, we do not address or attempt to inform participants of the potential interactions among the components of the audit risk model. To the extent that auditors’ judgments of management credibility are similarly affected, they would likely adjust their audit work to compensate for the increased assessments of control risk; we leave this question open for future research.

11 Inferences are unchanged when we reanalyze our hypotheses using either of the two individual measures (overall and specific to leases).

12 Inferences are unchanged when we reanalyze our hypotheses after omitting the ‘initial judgment’ covariate from the models.
task questions, we asked participants to assess their level of agreement with adaptations of Mercer’s (2001, 2005) competence and trustworthiness components of management credibility. We also asked participants to provide further assessments of the auditors’ responsibilities with respect to the application of effort, care, and skepticism while auditing the company.

3.2.3 Procedure. The experiment is administered in two envelopes. In envelope A, participants read background information about P. F. Chang’s China Bistro, Inc., a company which operates a nationwide chain of restaurants. The background information includes a brief company description, a condensed description of the two possible methods of accounting for leases, a statement indicating the method applied by the company, and a description of two common financial ratios (specifically, the debt-to-equity ratio and the cash-flows-from-operations-to-debt ratio). In order to convey the “choice” of accounting method, all participants are informed that companies can structure contracts so as to select from two alternative methods under GAAP. Then, participants review the company’s financial information (which consists of excerpts from the financial statements, the two financial ratios along with industry comparatives, and the lease footnote). Figure 1, Panel A presents these materials for the experimental treatment and disclosure-control conditions. Figure 1, Panel B presents these materials for the recognition-control condition. Next, participants answer two comprehension check questions to verify their understanding of the acceptable methods of accounting for leases under GAAP and the method that

13 The three competence statements are: (1) Company management is very competent at providing financial disclosures; (2) Company management has poor knowledge of the factors involved in providing disclosures; and, (3) Company management is highly qualified to provide financial disclosures about the Company. The second statement (“poor knowledge”) is reverse-scored. The three trustworthiness statements are: (1) Company management is very trustworthy, (2) Company management is very honest; and, (3) Company management is not truthful in their financial disclosures. The final statement (“not truthful”) is reverse-scored.

14 The exact wording of the four items is as follows (with emphasis in the original): (1) Compared to a typical audit, how much can P.F. Chang’s auditors rely on Company management for full and complete information while auditing the Company?; (2) Compared to a typical audit, how much effort do P.F. Chang’s auditors need to put into auditing the Company?; (3) Compared to a typical audit, how careful do P.F. Chang’s auditors need to be while auditing the Company?; and, (4) Professional skepticism is an attitude that includes a questioning mind and a critical assessment of audit evidence. Compared to a typical audit, what level of professional skepticism do P.F. Chang’s auditors need to apply while auditing the Company? The first item (“rely”) is reverse-scored.

15 Nelson and Tayler’s (2007) materials contain information for two firms, P.F. Chang’s (on which we base our materials) and a competitor. In our materials, we present the competitor’s ratios as the industry averages, which allows us to eliminate an alternative explanation for why our results might otherwise differ from theirs.
was applied by the company. Participants provide their initial assessments of the dependent measures (investment risk, management credibility, and audit expectation judgments) and return the case materials to envelope A before proceeding.

Envelope B contains duplicates of the background and financial information from envelope A for the participant’s reference. Participants assigned to the experimental treatment conditions then receive the supplemental reconciliation with the source manipulation (see Figure 1, Panel C), and answer three comprehension check questions to ensure adequate understanding of the source of the reconciliation and the effect of the capitalization adjustment on the financial ratios. Next, all participants again provide their assessments of the dependent measures, responding to the same questions listed in envelope A.

Following their revised assessments of the dependent measures, participants answer the series of corroborating questions about their credibility assessments and the auditor’s responsibilities, as well as an additional opinion question about the appropriateness of the alternate accounting methods. Finally, participants complete the session by answering demographic questions.

4. Results

4.1 Comprehension Checks

All participants responded to two comprehension check questions after reviewing the initial financial information to verify their understanding of (1) the acceptable methods of accounting for leases and (2) the method applied by the company in its financial statements. Participants in our two experimental treatment conditions also responded to additional comprehension check questions after receiving the supplemental reconciliation to verify their understanding of (1) the source of the reconciliation, and (2) the impact that recognition would have on both of the two financial ratios presented. For each separate question, nearly all participants (minimum of 95.3 percent) responded
correctly. Our analyses are based on the 95 participants who correctly answered all applicable comprehension check questions.16

4.2 TESTS OF HYPOTHESES

Table 1, Panel A reports descriptive statistics for each of our dependent measures, including means and least squares adjusted means for participants’ management credibility, investment risk, and audit expectations judgments. Figure 2 graphs the adjusted means, and Table 1, Panel B summarizes the planned comparisons used to test our hypotheses. We discuss each in turn.

4.2.1 Management credibility (H1). H1 predicts that participants who receive a reconciliation of the disclosed lease obligations to constructive capitalization will view management as less credible when the reconciliation is provided by an independent source rather than company management. In support of the hypothesis, we find that participants who received the analyst reconciliation view management as significantly less credible than do participants who received the management reconciliation (t = −2.64, p = 0.005).17

Analyses of the control conditions confirm that our participants are unlikely to differ in their views of management credibility unless prompted to do so through the presence of a reconciliation. Specifically, participants in the disclosure control group do not view management credibility significantly differently from those in the recognition control group (t = +0.42, two-sided p = 0.672). However, analyses also suggest that the presence of a salient reconciliation from an independent source lowers participants’ views of management credibility relative to recognition alone. We observe that participants who received the analyst reconciliation view management as significantly less credible than do

16 Participants in our two control conditions were not asked the additional comprehension check questions. Across all four conditions, the proportion of participants who did not pass all of the comprehension check questions varies significantly (two-sided p = 0.007 under Fisher’s Exact Test). This difference is likely caused by the greater number or difficulty of the comprehension check questions in the two experimental treatment conditions. Importantly, the proportion of participants who did not pass does not vary significantly between our two experimental treatment conditions (two-sided p = 0.294 under Fisher’s Exact Test). The effect of reconciliation source on investment risk (H2) weakens from marginal to non-significant when we instead analyze responses from all available 106 participants; however, the significance of reconciliation source on management credibility (H1) and audit expectations (H3) remains unchanged.

17 Because our hypotheses are directional, we report one-sided p-values unless otherwise indicated.
participants in the recognition control group (t = −4.52, two-sided p = <0.001), while participants who received the management reconciliation view management as only marginally less credible (t = −1.86, two-sided p = 0.066).18

Through post-task questions, we provide corroborating evidence that participants’ inferences about management credibility are related to their perceptions of management’s integrity and trustworthiness, rather than management’s competence. Specifically, we asked participants to assess their level of agreement with adaptations of Mercer’s (2001, 2005) competence and trustworthiness components of management credibility (see footnote 13). Taking the mean of each set of statements, we observe that participants’ revised credibility assessments appear more strongly positively correlated with trustworthiness (r = +0.422, p < 0.001) than with competence (r = +0.215, p = 0.018). A factor analysis of the individual items confirms the identification of two factors (eigenvalues of 2.94 and 1.15 with all other eigenvalues less than 1) that cumulatively explain 68 percent of the variance in the measures. Using the rotated factor analysis scores, we find that participants’ revised credibility assessments are significantly positively correlated with the trustworthiness factor (r= +0.451, p < 0.001) and not with the competence factor (r = −0.037, two-sided p = 0.722).

We find that the effect of reconciliation source in H1 is unchanged when we measure credibility using the participants’ mean rating of the three trustworthiness statements or using the rotated factor score for trustworthiness. Results from the control contrasts are stronger. Participants who received the analyst reconciliation continue to perceive significantly lower levels of management trustworthiness relative to the recognition control group (p < 0.001 using either the mean or factor score measure). However, participants who receive the management reconciliation perceive significantly higher levels of

18 Along with participants’ assessments of the dependent measures (management credibility, investment risk, and audit expectation judgments), we also asked participants to assess the amount of incentive that management has to choose one method of accounting for leases instead of the other, on an 11-point Likert scale anchored at 0 (no incentive) and 100 (high incentive). Analyses (untabulated) confirm that participants are only likely to consider management’s incentives when prompted to do so by the presence of a reconciliation. Participants in the two experimental conditions perceive higher incentive levels than participants in the two control conditions (t = +9.50, p < 0.001), but participants who received the analyst reconciliation perceive similar incentive levels as those who received the management reconciliation (t = +0.45, p = 0.325).
management trustworthiness relative to the recognition control group (p < 0.001 using either the mean or factor score measure), rather than the weakly lower levels of management credibility previously reported.

4.2.2 Investment risk (H2). H2 predicts that participants who receive a reconciliation of the disclosed lease obligations to constructive capitalization will perceive higher investment risk when the reconciliation is provided by an independent source rather than by company management. In support of the hypothesis, we find that participants who received the analyst reconciliation perceive higher investment risk than participants who received the management reconciliation (t = +1.49, p = 0.070).

Analyses of the control conditions confirm that disclosed information tends to affect judgments less than recognized information, consistent with the results of prior research and supporting a necessary assumption for auditors to reasonably conclude that litigation risk is lower for disclosed amounts (Libby et al. 2006). Specifically, participants in the disclosure control group perceive significantly lower investment risk than do participants in the recognition control group (t = −3.00, two-sided p = 0.004). Analyses also suggest that the presence of a reconciliation from an independent source tends to increase perceived investment risk relative to recognition alone. We observe that participants who received the analyst reconciliation perceive significantly higher investment risk than did participants in the recognition control group (t = +2.59, two-sided p = 0.011), while participants who received the management reconciliation do not (t = +1.34, two-sided p = 0.185).

4.2.3 Audit expectations (H3). H3 predicts that participants who receive a reconciliation of the disclosed lease obligations to constructive capitalization will also expect more from the auditor when the reconciliation is from an independent source rather than from company management. In support of the hypothesis, we find that participants who received the analyst reconciliation report significantly higher audit expectations than do participants who received the management reconciliation (t = +3.43, p < 0.001).

Mirroring the results with management credibility, analyses of the control conditions confirm that participants are unlikely to differ in their audit expectations unless prompted to do so through the presence of a reconciliation. Participants in the disclosure control group do not report significantly different audit expectations from those in the recognition control group (t = −0.74, two-sided p = 0.464).
However, analyses also suggest that the presence of a salient reconciliation from an independent source raises audit expectations relative to recognition alone. We observe that participants who received the analyst reconciliation report significantly higher audit expectations than did participants in the recognition control group ($t = +5.21$, two-sided $p < 0.001$), while participants who received the management reconciliation do not ($t = +1.60$, two-sided $p = 0.114$). Consistent with Nelson and Tayler’s (2007) weighting evidence, these findings suggest that independent reconciliation may create conditions in which audit expectations are higher (and, in turn, auditors’ litigation risk may also be higher) for disclosed information than for recognized information.

Recall that, in post-task questions, we asked participants to provide additional assessments of the auditors’ responsibilities with respect to the application of effort, care, and skepticism while auditing the company (see footnote 14). A factor analysis of the individual items results in the identification of a single “standard of care” factor (eigenvalue of 2.64 with all other eigenvalues less than 1) that explains 66 percent of the variance in the measures (Cronbach’s alpha = 0.819). Participants’ revised audit expectations (whether overall, specific to leases, or combined) are significantly positively correlated with this standard of care construct, whether measured using the mean assessments across statements (smallest $r = +0.448$, largest $p < 0.001$) or the first factor score (smallest $r = +0.439$, largest $p < 0.001$).

We find that the effect of reconciliation source in H3 is unchanged when we measure audit expectations using the participants’ mean rating of the statements or using the rotated factor score for standard of care. Results from the control contrasts are similar. Participants who receive the analyst reconciliation continue to report significantly higher expectations for the auditor’s standard of care relative to the recognition control group ($p < 0.005$ using either the mean or factor score measure). Participants who received the management reconciliation report weakly lower expectations for the auditor’s standard of care relative to the recognition control condition ($p = 0.129$ and 0.125 for the mean...
and factor score measurements of standard of care), rather than the weakly higher expectations previously reported.\footnote{Analyses of the remaining post-task questions (untabulated) suggest that the differences we observe in audit expectations are not likely to be caused by differences in participants’ beliefs about how to determine an appropriate standard of care, and that, consistent with the presentation of a reconciliation highlighting management’s incentives to prefer disclosure over recognition, participants in the two experimental treatment conditions (who received a reconciliation) view disclosure as relatively less appropriate than recognition compared to participants in the two control conditions.}

4.3 PATH ANALYSES AND MEDIATION

In developing our hypotheses, we imply that management credibility judgments mediate the differences in audit expectations caused by the reconciliation source. We therefore apply a path analysis to simultaneously estimate the predicted direct and indirect relationships among the variables, as presented in Figure 3. For simplicity, we focus on those participants in our experimental treatment conditions (i.e., those participants who received a reconciliation), and estimate the coefficients for participants who received the analyst reconciliation relative to those who received the management reconciliation.

We find results consistent with our hypotheses and mediation assumptions (Figure 3, Panel A). First, and most importantly, we observe that participants who received the analyst reconciliation view management as less credible than do participants who received the management reconciliation ($-0.140$, $z = -2.24$)\footnote{Often reported as “t values,” the critical ratios (of the path coefficient estimates divided by their respective standard errors) are properly labeled “asymptotic z-statistics.” Although they have an asymptotic standard normal distribution, their exact sampling distribution is not known. We therefore suggest that these statistics be interpreted relative to the critical $z$ value of 1.64 (1.28) for one-sided tests at 5% (10%), but we do not report precise $p$-values. The links within the model are estimated simultaneously using maximum likelihood estimation techniques, with similar results using generalized least-squares estimation.} and, in turn, participants who view management as less credible also expect more from the auditor ($-0.411$, $z = -4.27$). Second, we observe that participants who received the analyst reconciliation tend to perceive higher investment risk, but this tendency occurs indirectly through lower perceived management credibility ($-0.233$, $z = -1.25$) rather than through a direct effect of reconciliation source ($+0.070$, $z = +0.88$). We also find some evidence that the higher investment risk will also lead to increased audit expectations ($+0.182$, $z = +2.25$).
Because of potential ‘lack of fit’ in the model, we replicate the analyses using the rotated factor scores for trustworthiness and standard of care, and we find similar results (Figure 3, Panel B).\textsuperscript{21} We also perform a mediation analysis (Baron and Kenny 1986; Kenny et al. 1998) of management credibility on the effect of reconciliation source on audit expectations. Results (untabulated) confirm that the effect of the reconciliation source is reduced, indicating partial mediation. The effect of the reconciliation source is eliminated when we replicate the analyses using the rotated factor scores for trustworthiness and standard of care.

We also repeat the path analyses (untabulated) for our two control conditions. We find that recognition (relative to disclosure) significantly increases perceived investment risk, but this tendency occurs as a direct effect of recognition (+0.342, z = +5.69) rather than indirectly through lower perceived management credibility (−0.024, z = −0.51). Analyses of the control conditions confirm that our participants are unlikely to differ in their views of management credibility unless prompted to do so through the presence of a reconciliation, again supporting a key assumption for auditors to reasonably conclude that litigation risk is lower for disclosed amounts (Libby et al. 2006).

4.4 Additional data

We conduct a partial replication of our study in order to assess the potential demand effect of asking participants about management incentives and credibility immediately prior to their audit expectations. Additional participants are undergraduate students recruited from the next offering of the same junior-level managerial accounting course, who completed the study for extra course credit. We limit our design to the experimental treatment conditions in which reconciliation source is manipulated between-subjects (independent analyst or company management). Between subjects, we also manipulate

\textsuperscript{21} Specifically, using a chi-square test of model fit, the null hypothesis that the model presented in Figure 3, Panel A “fits the data” is rejected ($\chi^2_1=9.09, p = 0.003$). Additional goodness of fit indices, namely Bentler and Bonett’s normed fit index (NFI=0.771) and non-normed fit index (NNFI=−0.444), as well as Bentler’s comparative fit index (CFI=0.759), also indicate a lack of fit (i.e., with values < 0.90; Hatcher 2005). However, when we reanalyze the model using the rotated factor scores for trustworthiness and standard of care (Figure 3, Panel B), we no longer find any significant evidence of lack of fit. The chi-square of $\chi^2_1=0.960 (p = 0.327)$, NFI = 0.982, NNFI = 1.005, and CFI = 1.000 all indicate adequate fit.
whether participants are asked the full set of dependent measures (i.e., management credibility, investment risk, and audit expectation judgments) or a partial set in which the potentially leading ‘management credibility’ questions are omitted. However, to ensure that we can retest the mediation analyses, all participants are still asked to respond to the same post-task questions about management credibility and the auditor’s responsibilities. In order to provide preliminary evidence on litigation risk, we ask participants to consider the hypothetical discovery of an error in the audited financial statements in a new post-task question, and we counterbalance the order of this question (before vs. after the post-task questions about management credibility and the auditor’s responsibilities). Procedures were otherwise identical to the original study.

We again limit our analyses to the 101 participants who correctly answered all comprehension check questions. We analyze participants’ revised audit expectations as a function of reconciliation source (analyst or management), question set (full or partial), counterbalanced order (before or after), and the two- and three-way interactions, after again controlling for participants’ initial audit expectations. In untabulated analyses, we find no significant effect of the question set, order, or interactions (all two-sided p > 0.258), with participants who received the analyst reconciliation reporting higher audit expectations than participants who received the management reconciliation (t = +2.34, p = 0.065). When we measure audit expectations using participants’ mean rating of the post-task auditor responsibility statements or using their rotated factor score, the source effect strengthens (both p < 0.014). This replicates the primary finding from the original study.

22 Adapted from Libby et al (2006), participants were asked to assume that: “Some new leases at a consolidated subsidiary were accidentally omitted when the Company prepared their balance sheet and lease footnote, such that the present value of the lease obligations was understated by $17.5 million. Thus, the present value of future lease payments should have been $199,250, instead of $181,750 as originally disclosed in the footnote. On a percentage basis, the omission is equal to 4.6% of the total assets reported on the balance sheet. Given the error, how concerned are you that P. F. Chang’s auditors did not perform enough audit work to meet their professional responsibilities for this audit?” Responses were indicated on an 11-point Likert scale anchored at 0 (not at all concerned) and 100 (extremely concerned).

23 The proportion of additional participants who did not pass all of the comprehension check questions does not vary significantly across the conditions overall or specifically between the source manipulations (two-sided p = 0.277 and 0.857 under Fisher’s Exact Test, respectively). However, the proportion of additional participants who did not pass all of the comprehension check questions (30.3 percent) is qualitatively higher than in our original study (10.4 percent).
We then replicate the path analyses from the original study using the rotated factor scores for trustworthiness and standard of care (Figure 3, Panel C), extending the path to participants’ reported concerns about whether the auditor met their professional responsibilities with the hypothetical error (see footnote 22). We observe lower explanatory power ($R^2$s), but otherwise similar results. Although the effect is small, we also observe that participants’ higher audit expectations lead, in turn, to a statistically significant increase in concerns that the auditor did not meet their professional responsibilities given the later discovery of an error (+0.033, $z = +2.07$).24

5. Summary and Conclusions

In this paper, we examine how supplemental accounting disclosures affect users’ judgments about management credibility and, in turn, their audit expectations. In light of the recent renewal of public concern over auditors’ potential conflicts of interest and pressures to favor management (e.g., Moore et al. 2006), our purpose is to bring together recent financial accounting research on investors’ perceptions of disclosure and management credibility with recent auditing research on the effects of alternative accounting treatments on auditors’ judgments of tolerable misstatement and materiality. While auditors act as if they believe that litigation risk is lower for disclosed amounts than for recognized amounts (Libby et al. 2006), users who are able to clearly understand the differential impact of the two treatments may weight disclosed information more heavily (Nelson and Tayler 2007), which is inconsistent with lower litigation risk. To the extent that users also assess management as less credible for choosing to merely disclose information, users’ assessments may extend to their expectations of the auditor’s applied standard of care.

In our experiment, we separate the effects of users’ understanding of the financial impact of the accounting treatment (by manipulating the presence of a supplemental reconciliation relative to control conditions) from the inferences users might make based on management’s choice of accounting treatment and disclosures (by manipulating the stated source of the reconciliation).

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24 The chi-square of $\chi^2=5.997$ ($p = 0.199$) and Bentler’s comparative fit index (CFI=0.952) both indicate an acceptable fit. Bentler and Bonett’s normed fit index (NFI=0.885) and non-normed fit index (NNFI=0.881) remain close to the suggested value of 0.90 for an acceptable fit.
Participants who receive a reconciliation of the disclosed lease obligations to capitalization report lower perceptions of management credibility, higher investment risk, and higher audit expectations when the reconciliation is provided by a source independent of management rather than by company management itself. The path analysis applied to simultaneously estimate the predicted direct and indirect relationships among the variables supports these results, indicating that perceived management credibility mediates the observed effects for investment risk and audit expectations. These results suggest that users expect their assessments of management to be shared by auditors and reflected in their audit work.

Comparisons with the control conditions confirm that disclosed information alone tends to affect judgments less than recognized information, supporting a key assumption for the conclusion that audit litigation risk is generally lower for disclosed amounts (Libby et al. 2006). Users are unlikely to differ in their views of management credibility or in their audit expectations unless prompted to do so (in our experiment, via reconciliation), again supporting the assumption. In particular, users receiving an outside reconciliation report lower perceptions of management credibility, higher investment risk, and higher audit expectations relative to control conditions, consistent with Nelson and Tayler’s (2007) weighting evidence. These findings suggest boundary conditions in which audit expectations are higher (and, thus, auditors’ litigation risk may also be higher) for disclosed information than for recognized information.

Results demonstrate the effects of the presence and source of reconciliation on risk and management credibility judgments, extending research on the influence of managerial reporting discretion on audit expectations, with implications for research on the expectation gap and auditors’ potential litigation risks. First, we extend research on recognition versus disclosure by demonstrating the effects of the presence and source of reconciliation on risk and management credibility judgments. The results would likely be of interest to managers because they indicate the differential impact of legitimate, within-GAAP accounting treatment choices on users’ opinions of management integrity and the risk of investing in the company when that choice is made salient. These effects could, at least in short term evaluations, offset the potential benefits of “managing” earnings or debt information through disclosure.
Second, we extend research on the influence of managerial reporting discretion on expectations for audit planning and performance. Our results suggest that users expect auditors to share their concerns about how financial reporting decisions reflect on the integrity of management, and to adjust their efforts accordingly. These results provide empirical evidence that an auditor’s business risk is likely to change with perceived management integrity (i.e., a key factor in the control environment). These results also suggest that auditors may need to assess managers’ decisions not only in light of their conformity with GAAP, but also in light of how those decisions may be perceived by financial statement users who generate audit expectations based on their assessments of managers.

Finally, we extend research on the expectation gap and auditors’ litigation risk as it relates to the standard of care that should be observed for recognized versus disclosed amounts. Because disclosed amounts are typically given less attention than recognized amounts, auditors may act as if the litigation risk associated with them is lower (Libby et al. 2006). Our results show, however, that through the effect of reconciliation on management credibility judgments, users’ expectations of auditor diligence are higher (and thus auditors’ exposure to risk may be higher) for disclosed versus recognized amounts. While our results suggest that user’s audit expectations can be affected even when management’s choices conform with GAAP, this effect could be stronger in a litigation setting in which the financial impact of recognizing previously disclosed amounts would be made salient to jury members.

Our study also raises a number of opportunities for future research. For example, whether the audit expectation effects we document here extend to jurors’ litigation judgments (e.g., greater penalties for failure to identify errors in disclosed relative to recognized amounts) remains an empirical question. Also, to the extent that auditors are aware of the business risk implications of managers’ within-GAAP accounting choices, it is possible that auditors take other actions to offset any increased risk. As Mock and Wright (1999) and Allen et al. (2006) note, the extant research suggests that auditors are sensitive to client risk factors, but finds mixed results with respect to whether program plans are then adapted to those risks (see also Kizirian et al. 2005). However, results of some research (e.g., Bedard and Johnstone 2004) suggests that responsiveness to client risks may have improved in recent years (Allen et al. 2006). Thus,
while we focus on users’ judgments of management credibility in light of managers’ within-GAAP accounting choices, the effect of these choices on auditors’ perceptions of management, and the subsequent effects on audit planning and performance, represents an interesting avenue for future investigation, as does auditors’ anticipation of other disclosure transparency issues and market anomalies.
REFERENCES


Williams, P. A. 1996. The relation between a prior earnings forecast by management and analyst response to a current management forecast. The Accounting Review 71(1): 103-113

EXCERPTS FROM THE COMPANY’S FINANCIAL STATEMENTS:

P.F. Chang’s China Bistro, Inc.
Summarized Financial Results
for the 2005 Fiscal Year

Income Statement
Sales $706,941
Pre-tax earnings $ 36,710
Net earnings $ 26,054

Balance Sheet
Total assets $383,515
Total liabilities $107,763
Total equity $275,752

Cash Flows from Operations $109,505

Financial Ratios
Debt/Equity $107,763 x 100 = 39.1%
$275,752

Cash flows from operations/Debt $109,505 x 100 = 101.6%
$107,763

Footnote 8: Leases
The Company leases all of its restaurant properties. On average, the leases have an implicit interest rate of 8%, 22-year total lease lives, and are 50% expired. The Company's applicable tax rate is 35%.

Lease payments are recorded on an on-going basis. When a payment is made, it increases operating expenses on the income statement. Future lease payments will be at least (in thousands):

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Lease Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>$26,118</td>
</tr>
<tr>
<td>2007</td>
<td>26,764</td>
</tr>
<tr>
<td>2008</td>
<td>26,314</td>
</tr>
<tr>
<td>2009</td>
<td>25,902</td>
</tr>
<tr>
<td>2010</td>
<td>25,607</td>
</tr>
<tr>
<td>Thereafter</td>
<td>147,350</td>
</tr>
<tr>
<td>Total</td>
<td>$278,055</td>
</tr>
<tr>
<td>Present value</td>
<td>$181,750</td>
</tr>
</tbody>
</table>

Panel A: Financial information initially provided in both experimental treatment conditions and the disclosure control condition

Figure 1. Excerpts of materials by experimental treatment and control condition.
EXCERPTS FROM THE COMPANY’S FINANCIAL STATEMENTS:

P.F. Chang’s China Bistro, Inc.
Summarized Financial Results
for the 2005 Fiscal Year

Income Statement
Sales $706,941
Pre-tax earnings $36,710
Net earnings $26,054

Balance Sheet
Total assets $531,005
Total liabilities $289,513
Total equity $241,492

Cash Flows from Operations $109,505

Financial Ratios
Debt/Equity $289,513 x 100 = 119.9%
$241,492
Cash flows from operations/Debt $109,505 x 100 = 37.8%
$289,513

Footnote 8: Leases
The Company leases all of its restaurant properties. On average, the leases have an implicit interest rate
of 8%, 22-year total lease lives, and are 50% expired. The Company’s applicable tax rate is 35%.
The present value of the future lease payments is recorded as debt on the balance sheet. When a payment
is made, it decreases the debt on the balance sheet. Future lease payments will be at least (in thousands):

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Lease Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>$26,118</td>
</tr>
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<td>2010</td>
<td>25,607</td>
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<tr>
<td>Thereafter</td>
<td>147,350</td>
</tr>
<tr>
<td>Total</td>
<td>$278,055</td>
</tr>
<tr>
<td>Present value</td>
<td>$181,750</td>
</tr>
</tbody>
</table>

Panel B: Financial information initially provided in the recognition control condition

Figure 1. Continued.
Investors may find it helpful to think about how a company’s financial results would change if an alternative accounting method had been applied. Company management may choose to provide this type of additional report. If the Company chooses not to provide the report, an independent research analyst may step in to provide the report instead.

Company management has chosen not to provide that report for its investors. The information on the following page was prepared by an independent research analyst, and was included in the analyst’s own research report about the Company.

OR

Company management has chosen to provide that report for its investors. The information on the following page was prepared by Company management, and was included in the Company’s financial statements.

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**Reconciliation: Alternative accounting for leases**

This reconciliation shows how the Company’s financial results would change if the alternative method of accounting for leases had been applied. Instead of recording lease payments on an on-going basis, the alternative method initially records the leased property as an asset and the present value of the future lease payments as debt on the balance sheet. Then, when a payment is made, it decreases the amount of the debt.

**Adjustments to Balance Sheet**

<table>
<thead>
<tr>
<th>Description</th>
<th>Without Recognizing Leases</th>
<th>After Recognizing Leases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets, without recognizing leases</td>
<td>$383,515</td>
<td>$531,005</td>
</tr>
<tr>
<td>Add: Increase in assets</td>
<td>147,490</td>
<td>181,750</td>
</tr>
<tr>
<td>Total assets, after recognizing leases</td>
<td><strong>$531,005</strong></td>
<td><strong>$289,513</strong></td>
</tr>
<tr>
<td>Total liabilities, without recognizing leases</td>
<td>$107,763</td>
<td>$275,752</td>
</tr>
<tr>
<td>Add: Increase in liabilities</td>
<td></td>
<td>34,260</td>
</tr>
<tr>
<td>Total liabilities, after recognizing leases</td>
<td><strong>$289,513</strong></td>
<td><strong>$241,492</strong></td>
</tr>
<tr>
<td>Total equity, without recognizing leases</td>
<td>$275,752</td>
<td></td>
</tr>
<tr>
<td>Deduct: Decrease in equity</td>
<td></td>
<td>34,260</td>
</tr>
<tr>
<td>Total equity, after recognizing leases</td>
<td><strong>$241,492</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Adjusted Financial Ratios**

<table>
<thead>
<tr>
<th>Description</th>
<th>Without Recognizing Leases</th>
<th>After Recognizing Leases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt/equity</td>
<td>39.1%</td>
<td>119.9%</td>
</tr>
<tr>
<td>Cash flows from operations/Debt</td>
<td>101.6%</td>
<td>37.8%</td>
</tr>
</tbody>
</table>

**Panel C:** Additional financial information subsequently provided in the experimental treatment conditions, with the source of the reconciliation manipulated to be either (1) an independent research analyst, or (2) company management.

**Figure 1.** Continued.
Figure 2. ANCOVA-adjusted means by condition. See Table 1 for definitions.
Panel A: Credibility and audit expectations measured on 11-pt Likert scales

Panel B: Trustworthiness and audit standard of care expectations measured using rotated factor scores

Panel C: Extension of path using supplemental data, with trustworthiness and audit standard of care expectations measured using rotated factor scores

Figure 3. Summary of predicted and observed relationships in participants’ revised assessments in the two experimental conditions (see Table 1 for definitions). Plus signs (+) indicate expected positive relationships and minus signs (−) indicate expected negative relationships for participants who receive the reconciliation from an outside analyst relative those who receive it from company management.
### Table 1
Results

**Panel A: Descriptive statistics: Mean (standard deviation)**

<table>
<thead>
<tr>
<th>Reporting Condition</th>
<th>N</th>
<th>Initial</th>
<th>Revised</th>
<th>ANCOVA adjusted</th>
<th>Initial</th>
<th>Revised</th>
<th>ANCOVA adjusted</th>
<th>Initial</th>
<th>Revised</th>
<th>ANCOVA adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control conditions:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disclosure</td>
<td>25</td>
<td>0.524</td>
<td>0.528</td>
<td>0.536</td>
<td>0.252</td>
<td>0.328</td>
<td>0.358</td>
<td>0.550</td>
<td>0.544</td>
<td>0.554</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.183)</td>
<td>(0.193)</td>
<td>(0.240)</td>
<td>(0.259)</td>
<td>(0.146)</td>
<td>(0.163)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognition</td>
<td>27</td>
<td>0.515</td>
<td>0.503</td>
<td>0.515</td>
<td>0.674</td>
<td>0.670</td>
<td>0.585</td>
<td>0.594</td>
<td>0.593</td>
<td>0.581</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.170)</td>
<td>(0.153)</td>
<td>(0.170)</td>
<td>(0.172)</td>
<td>(0.123)</td>
<td>(0.120)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experimental conditions:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mgmt (Disclosure plus management-sourced reconciliation)</td>
<td>23</td>
<td>0.570</td>
<td>0.435</td>
<td>0.423</td>
<td>0.230</td>
<td>0.652</td>
<td>0.688</td>
<td>0.526</td>
<td>0.619</td>
<td>0.641</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.194)</td>
<td>(0.217)</td>
<td>(0.290)</td>
<td>(0.301)</td>
<td>(0.098)</td>
<td>(0.178)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyst (Disclosure plus analyst-sourced reconciliation)</td>
<td>20</td>
<td>0.570</td>
<td>0.295</td>
<td>0.283</td>
<td>0.230</td>
<td>0.755</td>
<td>0.791</td>
<td>0.612</td>
<td>0.802</td>
<td>0.782</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.184)</td>
<td>(0.193)</td>
<td>(0.258)</td>
<td>(0.182)</td>
<td>(0.126)</td>
<td>(0.094)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Panel B: Planned contrasts using adjusted means**

<table>
<thead>
<tr>
<th>Contrast</th>
<th>Management Credibility</th>
<th>Investment Risk</th>
<th>Audit Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate (Std error)</td>
<td>Estimate (Std error)</td>
<td>Estimate (Std error)</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>p^d</td>
<td>t</td>
</tr>
<tr>
<td>Reconciliation Source: Mgmt &lt; Analyst</td>
<td>-0.140 (0.053)</td>
<td>-2.64 0.005</td>
<td>0.103 (0.069)</td>
</tr>
<tr>
<td>Controls: Recognition &lt; Disclosure</td>
<td>0.020 (0.048)</td>
<td>0.42 0.672</td>
<td>-0.226 (0.075)</td>
</tr>
<tr>
<td>Recognition &lt; Analyst</td>
<td>-0.232 (0.051)</td>
<td>-4.52 &lt;0.001</td>
<td>0.207 (0.080)</td>
</tr>
<tr>
<td>Recognition &lt; Mgmt</td>
<td>-0.092 (0.049)</td>
<td>-1.86 0.066</td>
<td>0.104 (0.078)</td>
</tr>
</tbody>
</table>

^a Each of the dependent measures (management credibility, investment risk, and audit expectation judgments) are assessed on 11-point Likert scales labeled from 0 to 100, in 10-point increments, with higher values indicating higher levels of assessed credibility, risk, or expectations. For ease of interpretation, we divide by 100 and present all of our dependent measures on a percentage basis. Management credibility is participants’ assessment of how credible (trustworthy or believable) management is likely to be compared to the management of other companies in the industry. Investment risk is participants’
assessments of how the risk of investing in the company’s long-term debt compares to the industry in general. Participants assess two aspects of their expectations for the auditor: the level of audit risk that the company’s auditor should apply compared to the typical audit with respect to (1) the overall audit, and (2) the leases held by the company; we report the mean as our measure of participants’ audit expectations.

b Between subjects, we manipulate the availability of financial disclosures for a company’s leases. In our two experimental conditions, the company maintains operating leases, and the focus of our analyses is on the impact of receiving a reconciliation from footnote disclosure to constructive capitalization of the leases. Specifically, participants initially receive a company’s financial information, including footnote disclosure of its operating leases. Participants later receive a supplemental reconciliation indicating the financial results if the disclosed operating leases had instead been capitalized in the financial statements. The source of the reconciliation is manipulated to be either (1) company management or (2) an independent research analyst. We complement our two experimental conditions with two control conditions, in which participants do not receive any supplemental reconciliation. In the first control condition, participants only receive the company’s financial information that includes footnote disclosure of its operating leases. In the second control condition, participants only receive the company’s financial information, but the company has maintained capital leases (which are recognized in the financial statements) instead of operating leases (which are not recognized in the financial statements). In all conditions, the lease footnote provides identical information, sufficient for knowledgeable individuals to constructively capitalize the operating leases (or reverse the recognition of capital leases).

c Participants are asked to provide two sets of dependent measures. Initial responses are recorded after participants first view excerpts from the company’s financial statements, including footnote disclosure of the company’s lease information. Revised responses are recorded after participants receive the supplemental reconciliation (if applicable). In our analyses, we adjust for the influence of participants’ initial responses using analysis of covariance (ANCOVA) and thus, we report the ANCOVA least squares adjusted means.

d Reported p-values are one-tailed for the reconciliation source contrasts and two-tailed for the controls contrasts.