

The Effects of Internal Audit Report Disclosure on Investor Confidence and Decisions

Fatema-Tuz-Zohra*
Umma Rumana Huq**

Abstract : While reporting requirements increase transparency about management, the audit committee, and the external auditor, there are no required disclosures relating to a company's internal audit function. This study evaluates whether the inclusion of an Internal Audit Report (IAR) increases investor confidence in financial reporting reliability. The study also investigates whether company fraud risk affects use of the IAR. Seventy undergraduate business students acting as surrogates for nonprofessional investors participated in a 2 × 2 experiment with internal audit disclosure and fraud risk randomly manipulated between subjects. The results indicate that providing an IAR in management's financial information increases investor confidence that reported financial information is free from both errors and intentional misstatements. The interaction results reveal that the IAR effect on investor confidence significantly differs for companies with high fraud risk than those with low fraud risk. Finally, self-insight results show that participants found the External Audit Report (EAR) to be significantly more useful in decision making when an Audit Committee Report is given (in addition to EAR) than when an IAR is disclosed (in addition to EAR).

Introduction

Recent corporate scandals and earnings restatements have resulted in an increased emphasis on the need for strong corporate governance to ensure financial reporting quality. The internal audit function (IAF) plays a unique and critical role in corporate governance by monitoring organizational risks and helping ensure financial reporting reliability. For example, studies have found that management might have less incentive to aggressively manipulate earnings if they believe that a competent IAF is able to understand and detect earnings management (Prawitt et al., 2009). Further, an internal auditor is more familiar with the firm's structure and accounting information system than an external auditor, and this enhances an internal auditor's experience regarding the potential areas of fraud. In this context, DeZoort, (1998), argued that inexperienced IA members of staff were not knowledgeable about the areas being audited; therefore, they

* Lecturer, Department of Accounting and Information Systems, University of Dhaka

** Lecturer, Department of Finance, University of Dhaka

neither identified the potential areas of fraud nor understood management's incentives for earnings manipulation. Thus optimal IAF necessitates proper knowledge about the industry and company. Independence, on the other hand, is another critical factor that enables internal audit staff to report all material cases they detect without any fear even if they disclose the faults of management itself.

Gordon and Smith (1992) found that a control function, such as that performed by internal audit, can lead to better firm performance. Despite being an integral part of the governance of a company, there is an almost complete lack of information about the existence, composition, activities, and responsibilities of the internal audit function.

The objective of this study is to examine whether investor confidence in the reliability of management's financial information is increased by the inclusion of an Internal Audit Report (IAR), detailing the existence, responsibilities, accountabilities, independence and activities (related to the findings of the audit department) of the company's internal audit function. The study also investigates the extent that differences in company fraud risk factors affect the impact of an IAR on investor confidence in financial reporting reliability. The results provide experimental evidence on the potential benefits of increased transparency about the internal audit function.

The study is driven by the need for increased transparency about the strength of a company's corporate governance. The four cornerstones of corporate governance – the management, the audit committee, the external auditor, and the internal audit department, are considered essential to assessing and reducing organizational risks (Institute of Internal Auditors Research Foundation [IIARF] 2002; Gramling et al. 2004).

The scenario of internal audit, accounting standards and disclosure and its impacts on CG and management practices in Bangladesh are mixed. There are now elements of both positive scopes and new challenges and risk for the corporations in these areas. Following the tradition of English law, Bangladesh accounting standards are not based on codified law, but rely on Generally Accepted Accounting Principles (GAAP) developed by accounting profession. The internal audit departments of existing companies comply with the Standard on International Audit Guidelines and Practices. There are currently no reporting requirements for the internal audit function. The internal audit reports are not disclosed to the public for their decision making process as there is no requirements for this in the Company's Act.

Cognitive dissonance theory and source credibility theory provide a basis for predicting that investor confidence in financial reporting will increase with the inclusion of an IAR due to investors seeking to become more comfortable with information risk and placing

more reliance on information from more credible sources. Furthermore, the study predicts that the increase in investor confidence will be greater for companies with a high risk of fraud than for companies with low fraud risk due to the increased potential for bias in the high fraud risk company.

A 2×2 experiment was conducted with fraud risk and IAR disclosure manipulated randomly between subjects to determine differences in investor confidence in financial reporting reliability. Seventy graduate business students from Dhaka University completed a survey that consisted of summary financial statements, the External Auditor Report, and the Audit Committee Report/IAR. IAR disclosure was manipulated by randomly giving participants either an IAR or Audit Committee Report. Furthermore, company fraud risk was manipulated by randomly differing company fraud risk factors among participants. The participants were then asked a series of questions to assess their confidence that the financial information was free from both intentional and unintentional material misstatement.

Additionally, the participants were asked questions to determine their self-insight into the perceived usefulness of the included reports in their decision-making. As predicted, the results indicate that investor confidence in financial reporting reliability (i.e. freedom from both intentional and unintentional errors) is increased with the inclusion of an IAR. Results contradicted with prediction when risk factor is present. When there is risk factor present significant difference is found in IAR and no IAR case.

This study's results have research, practical, and policy implications. From a research perspective, the study contributes to the internal audit and, more broadly, to the corporate governance literature by providing experimental evidence that reinforces the importance of the internal audit function on an organization's corporate governance. Additionally, the study contributes to prior literature on investor decision-making under uncertainty by providing further arguments about investors' use of information in risky situations, especially in a situation of volatile stock market. From a practical perspective, this study complements prior research on factors associated with a company's investment in internal audit (e.g. Carcello et al. 2005). By understanding the increase to investor confidence in financial reporting reliability, companies will have incentives for increased internal audit transparency and potentially for increased investment in the internal audit function. From a policy perspective, this study should help policymakers by providing evidence on the potential benefits of increased corporate governance disclosures. Firm regulators (such as the SEC and stock exchanges) benefit from enhanced transparency because greater transparency makes it easier for regulators to detect illegal behavior and to protect investors' interests.

The remainder of this paper is organized as follows. The next section provides background to the study and develops the hypotheses. The third section describes the study's experimental design. The fourth section presents the results of the study. The last section concludes with discussion of the study's implications and limitations, as well as recommendations for future research

Background and Hypothesis

- **Internal audit's role in corporate governance**

Studies on corporate governance (CG) in recent years have focused their attention to the role of maintaining the transparency and accountability of financial reporting. For example, introducing new acts of CG to improve Financial Report Quality (Cohen et al., 2008) and the improvement of quality of internal audit function (IAF) (Abdolmohammadi et al., 2006; Allgerini et al., 2006; Cooper et al., 2006). While reporting requirements increase transparency about management, the audit committee, and the external auditor; there are no required disclosures relating to a company's internal audit function.

Developing countries have taken initiatives to continuously improve their system of CG to improve the quality of financial reporting and to recover investors' confidence in financial reports. For example, Malaysia developed the Malaysian code of corporate governance (MCCG) in 1999 and enforced it in 2001. Regulations have an important role, in that weak regulations could reduce the governance quality and FRQ, resulting in poor market efficiency. Under the Bangladesh code of corporate governance (2006), under the "FINANCIAL REPORTING, AUDITING AND NON-FINANCIAL DISCLOSURES", the Chairman of the Board, CEO and CFO should supply two additional statements:

One, that the company is a going concern.

Two, how effective is the company's internal control system and internal audit department. This should include any irregularities involving management or employees who have significant roles in the system of internal control. This statement should also be signed by the Chairman of the Audit Committee (if one exists).

Corporate governance affects stock market liquidity because effective governance improves financial and operational transparency, which decreases information asymmetries (Chung *et al* 2010). The association between disclosure and liquidity is suggested by signaling theory indicating that firms' increased disclosure serve to reduce

the information asymmetry between firms and investors, and thus increase the stock market liquidity to firms.

Corporate scandals have led to an intense focus on corporate governance, effective oversight and sound internal controls, all of which have resulted in internal auditing enjoying a level of prominence and attention unlike ever before (Spira & Page 2003:654; Carcello *et al* 2005:117). Such scandals (usually originating from fraudulent accounting activities) and the resulting corrective legislation highlight the critical role that the IAF plays (Archambeault *et al* 2008:384). In addition, researchers have documented an association between weak governance (such as the lack independence of the board, the lower quality of audit committee (AC), and the absence of an IAF) and the link to financial crises (Beasley *et al.*, 2000; Dechow *et al.*, 1996).

The study by Holt (2006) evaluates whether the inclusion of an Internal Audit Report (IAR) increases investor confidence in financial reporting reliability & thereby affects taking investing decision. A computer based survey was conducted just at the beginning of the time of Sarbanes Oxley era. Question was asked as to if the participant would like to invest in shares given summary financial statements, Management's Discussion and Analysis, Management's Report on Internal Controls, the External Auditor Report, and the Audit Committee Report. IAR disclosure was manipulated by randomly giving participants either an IAR that detailed the nature of the internal audit department, to whom the internal audit function reports, and the types of activities undertaken by the internal department or an innocuous report (i.e., a Power of Attorney). The result supports that IAR increases investors' confidence. The study also investigates whether company fraud risk affects use of the IAR. Eighty graduate business students acting as surrogates for nonprofessional investors participated in a 2x2 experiment with internal audit disclosure and fraud risk randomly manipulated between subjects.

Despite internal audit's role as a cornerstone of corporate governance (IIA 2003; Gramling *et al.* 2004), external stakeholders typically have no information about the composition, responsibilities, or activities of the function (Mercer 2004). This information is important given the heterogeneity that is found across internal audit functions which makes it difficult for stakeholders to make informed decisions related to the role of this key component in a firm's overall governance structure (Gramling *et al.* 2004). Mercer (2004, 190) notes that: Internal auditors often serve as the first line of defense against disclosure errors, ferreting out unintentional errors caused by weaknesses in a company's internal controls and intentional errors due to fraud. Consequently, if investors can assess internal audit quality, then firms with a strong internal audit department may have higher disclosure credibility.

- **IAR effectiveness:**

James (2003) assessed whether internal audit role and reporting relationships affect investor judgment and decision-making. The experiment used a 2×2 experimental (ANCOVA) design with internal audit role (primarily assurance vs. primarily consulting) and reporting relationship (strategically and administratively to the CFO vs. strategically to the audit committee and administratively to the CEO) manipulated randomly between subjects. The first internal audit characteristic examined in this study was internal audit role. The study predicted that participants would find higher perceived disclosure credibility when internal audit's role was primarily assurance-related than consulting-related. It was also predicted that perceived level of assurance would explain the relationship between internal audit role and perceived disclosure credibility. The results indicate that internal audit role did not significantly affect perceived disclosure credibility.

However, DeZoort, et. al. (2001) found that external auditors consider internal auditors to be less objective when their function is consulting based. Lowe et al. (1999) found, financial statement users' perceptions of the reliability of financial statements was lower in cases where internal audit was outsourced to the company's own external auditor than when the function was performed in-house or by a different CPA firm. Similarly, Swanger and Chewning (2001) found that financial analysts perceived external auditor independence to be greater when internal audit was in-house or outsourced to a firm other than the company's external auditor than when it was outsourced to the company's external auditor.

The second internal audit characteristic examined in the study by James (2003) was internal audit reporting relationship. The study predicted that participants would find higher perceived disclosure credibility when the CAE (Chief Audit Executive) reported strategically to the audit committee and administratively to the CEO than when the CAE reported both strategically and administratively to the CFO. It was also predicted that perceived level of assurance would explain the relationship between internal audit reporting relationship and perceived disclosure credibility. The results indicate that participants perceived disclosure credibility to be higher when the CAE reported to the audit committee/CEO versus the CFO. Furthermore, the results indicate that this increase in perceived disclosure credibility was explained by investor perceptions of the level of assurance associated with the disclosure. Additional internal auditing research has evaluated how perceptions of internal audit objectivity are affected by the types of activities that the function performs.

Specifically, the literature suggests that objective internal audit functions are generally characterized as being in-house or outsourced to a firm that does not serve as the company's external auditor, being governed by the board of directors i.e. audit committee, and having performed activities that are primarily assurance related.

Saha (2011) states that Public companies increasingly include management reports on internal audit function in their annual reports as a good corporate governance practice. Nowadays, management is much concerned of contents what it should include in these reports. Management reports typically discuss the following topics:

- Financial statement presentation.
- The purpose, nature and components of the company's internal controls.
- The role of internal audit.
- The role of the audit committee.
- The role of the independent auditor.

Despite the findings, the stakeholders are not privy to the required information in decision making regarding IAF due to non-prevalence of disclosure requirements.

- **The effect of an IAR on investor confidence in financial reporting**

The decision to invest in a company is inherently risky. Investment risk is in part due to information irregularity that exists between company management and investors. Shanteau and Anderson (1972) found that individuals often seek information to reduce uncertainty about their decisions when encountering these types of risky situations. Elliott and Jacobson (1994) noted that informative disclosures help to reduce this information risk, and thus are useful to investor decision-making by supplying the investor with a better understanding of the company's overall economic risk.

The need for increased information related to a potential investment can be further explained by cognitive dissonance theory. Festinger (1957)'s famous theory of cognitive dissonance states that a person confronted with a bad experience after having made a choice will be looking for justifications of his past decision and tend to ignore the dissonant information. As a result, they are motivated to seek additional information in an attempt to reduce this discomfort. Therefore, cognitive dissonance theory suggests that increased information will help investors in an attempt to reduce the psychological tension that occurs as. Bonded rationality and application of heuristics suggest investors will find voluntary disclosure useful. The current study tests the extent that information risk in a company, as evidenced by an increase in investor confidence in financial

reporting reliability, is minimized through increased disclosure of the internal audit function.

Source credibility theory provides a basis for predicting individual use of new information based upon the persuasiveness of the source. This theory states that when faced with uncertainty, individuals tend to utilize information from credible sources. Individuals place more (less) weight on information received from more (less) credible sources. When evaluating credibility, the two most important components are trustworthiness and expertise.

Fraud and misconduct survey by KPMG in 2008 showed that detection of largest frauds by internal audit department is increasing. An effective internal audit function provides an additional layer of control for detecting errors and preventing fraud. This additional layer of control should result in information that is considered more trustworthy than that information from sources lacking an internal audit function. The extant literature provides evidence that investors generally find audited information to be more credible than unaudited information. Therefore, source credibility theory suggests that investors will perceive financial information that includes an IAR to be more credible than financial information that does not.

Specifically, investors in uncertain investment decision contexts should rely upon an IAR and have higher confidence in oversight effectiveness and financial reporting reliability than investors without access to information about the internal audit function. Stated formally:

HYPOTHESIS 1a

Investor confidence in oversight effectiveness will be greater for companies that include an IAR than for companies that do not.

HYPOTHESIS 1b

Investor confidence in financial reporting reliability will be greater for companies that include an IAR than for companies that do not.

We also predict that the extent of IAR disclosure effect on confidence in oversight effectiveness and financial reporting reliability will depend on the level of financial statement fraud risk within the company. If a company has high fraud risk, there is a greater risk that the financial information reported by management will be biased. The financial information from a company with high fraud risk should be perceived as less credible than information received from a low fraud risk company.

Furthermore, cognitive dissonance theory suggests this increase in fraud risk will result in an increase in the amount of psychological discomfort experienced by a potential investor of the company. As a result, investors will search for additional information in an attempt to reduce this discomfort. Given this need for additional information with high fraud risk companies, knowledge of an internal audit function should be more relevant to investor confidence for high risk companies than low risk companies. Therefore, the study predicts that internal audit reporting will be more useful to investors of high fraud risk companies than to those of low fraud risk companies. Stated formally:

HYPOTHESIS 2a

The effect of IAR disclosure on investor confidence in oversight effectiveness will be greater for high fraud risk companies than for low fraud risk companies.

HYPOTHESIS 2b

The effect of IAR disclosure on investor confidence in financial reporting reliability will be greater for high fraud risk companies than for low fraud risk companies.

Prior research provides consistent evidence of a positive relation between corporate governance and financial reporting quality (e.g., Dechow et al. 1996; Beasley et al. 1999; Beasley et al. 2000; Klein 2002; Agrawal and Chadha 2005; Krishnan 2005; Srinivasan 2005; Wang 9 2006). For example, Beasley et al. (2000) found that companies with fraudulent financial reporting had less independent audit committees and boards of directors, fewer audit committee meetings, and less internal audit support than their no-fraud counterparts. Given internal audit's unique and critical role as a governance mechanism responsible for overseeing and testing internal controls and financial reporting, we posit that a formal IAR describing an effective internal audit function will increase confidence in financial reporting reliability in part through increased perceptions of oversight effectiveness. Stated formally:

HYPOTHESIS 3

Investor confidence in oversight effectiveness will mediate the relation between IAR disclosure and confidence in financial reporting.

We also predict that confidence in oversight effectiveness and financial reporting reliability will mediate the relation between IAR disclosure and individuals' company

investment recommendations. Healy et al. (1999) found that expanded company disclosures lead to increases in firm stock returns, ownership, liquidity, and analyst followings. These findings suggest that investors value reduced information risk and increase investment interest as a result of expanded company disclosure. Accordingly, IAR disclosure should increase the likelihood of recommending investment in a company in part through increased confidence in oversight effectiveness and financial reporting reliability. Stated formally:

HYPOTHESIS 4a

Investor confidence in oversight effectiveness will mediate the relation between IAR disclosure and investment recommendation.

HYPOTHESIS 4b

Investor confidence in financial reporting reliability will mediate the relation between IAR disclosure and investment recommendation

DESIGN AND METHOD

Experimental Design

This study used a 2 x 2 between-subjects ANOVA design. The independent variables were fraud risk and IAR disclosure. Participants were randomly assigned one of the four groups. Bailey (1982) suggested that the use of identical sets of financial statements that differed only by an external audit report was an appropriate approach for evaluating the usefulness of external audit reports. This study used a similar approach for evaluating the usefulness of an IAR. The cases were developed with information sets that differed only by the experimental manipulations.

The Research Instrument

The survey questionnaire contained case materials (see Appendix). Each case described a hypothetical scenario in which the participant was considering whether to recommend their family member in investing Tk. 50,000 in the stock of a company. After providing client background information, the instrument provided summary financial information before directing the participant to a report page. The report page gave participants access to summary information of external audit report, internal audit report/ audit committee report. Participants were advised that they could review as many reports and spend as much time reviewing the reports as they deemed necessary to make their recommendation decisions about the company.

The fraud risk was manipulated in the company background information at two levels: high and low. Each participant got either a low risk case or a high risk case.

In the low risk case

- Management's compensation was not closely tied to meeting analysts' forecasts,
 - The company had a low rate of management turnover,
 - The company easily complied with all debt covenants.
-

The high risk case

- Management's compensation was closely tied to meeting analysts' forecasts,
 - The company had a high rate of management turnover,
 - The company had restructured a large portion of their debt due to debt covenant violations.
-

The presence of an IAR (IAR) was manipulated by including either an IAR or an audit committee report. Prior research has shown that individuals may place reliance on information that is emphasized regardless of the informativeness of the information. To control for this possibility, an innocuous report, an audit committee report was included in the cases that did not include an IAR. It is to mention that information presented in IAR is significantly different from that of the audit committee report. The latter only talks about responsibility of the audit committee to oversight internal auditing, but no details is typically found. Also it signals indirect information about the IAF. There is empirical evidence of how the characteristics of the audit committee are related to the extent of investment in internal auditing. So investors only get an abstract idea about the company's internal auditing function.

The IAR listed the responsibilities of the function, to whom the company's Head of Internal Audit reported, the composition of the function, and the types of activities that the function engaged in during the period. Specifically, the IAR stated that the Head of Internal Audit reported directly to the audit committee, that the internal audit function was entirely in-house. In addition to the IAR or Audit Committee Report, all four cases included an External Audit Report (unqualified combined financial statements opinion).

These reports were constructed from examples obtained in actual public company filings. Participants were asked to provide answers relating to confidence in financial statement reliability.

To assess confidence in the fair presentation of financial information, the participants were asked the following questions:

- How confident are you that management's financial statements are free from intentional material misstatement?
- How confident are you that management's financial statements are free from unintentional material misstatement?
- How effective do you believe the oversight of the financial statements?
- How likely are you to recommend investing in the company's stock?

Intentional and unintentional material misstatements were considered separately in order to assess potential differences related to those acts which are considered to be fraudulent versus those that are the result of inadvertent errors. After leaving the report section of the questionnaire, participants were asked questions about their confidence in financial statement reliability, their assessment of oversight effectiveness, and their likelihood of recommending investment in the company. Both misstatement questions used scales anchored 0 = "Not at all Confident" and 100 = "Extremely Confident". The participants' confidence assessments for intentional and unintentional material misstatements were averaged to provide one measure for confidence in financial reporting. We assessed oversight effectiveness by asking participants how effective they believe oversight of the financial statements is on a scale anchored 0 = "Not at all Effective" and 100 = "Extremely Effective". We measured investment recommendation by asking participants how likely were they to recommend that their family member invest in the company's stock on a scale anchored 0 = "Not at all Likely" and 100 = "Extremely Likely".

Next, self-insight measures were taken to assess the perceived usefulness of each of the reports in developing answers to the previous questions. Participants were asked to allocate 100 points among the reports based upon their usefulness. Finally, the participants provided demographic information related to their age, gender, education, professional certifications/licenses, investing experience, and experience in reading annual reports/proxy statements.

Participants

Undergraduate business students from Dhaka University participated in the study. These participants were requested to participate in the decision-making study. They were requested to fill up a questionnaire.

RESULTS

Participant Demographics

Table 1 (in appendix) presents the descriptive information of the 70 participants in the study. All of the participants were undergrad students. Participant gender was split 43 to 57 percent between male and female, respectively; and the average participant was 22 years old. Most of the participants had no experience in investing in stocks, and all of the participants had previously read a company's annual report. There were no significant differences in any of the demographic variables across experimental groups.

Hypothesis Test Results

Table 2 (in appendix) presents the ANOVA and descriptive cell results for confidence in oversight effectiveness and financial reporting reliability. The results in Table 2, Panel A, (in appendix) indicate significant main effects for IAR and RISK for both the oversight effectiveness and financial reporting reliability measures (IAR one-tailed p -values < 0.001 and < 0.001 , respectively and RISK one-tailed p -value < 0.001 and p -value $= 0.01$, respectively). As predicted in Hypothesis 1a, the Table 2, Panel B, (in appendix) results show that confidence in oversight effectiveness is significantly greater with IAR disclosure (mean = 60) than without IAR disclosure (mean = 36.714). Similarly, the results support Hypothesis 1b by showing that confidence in financial reporting reliability is significantly greater with IAR disclosure (mean = 53.94) than without IAR disclosure (mean = 37.857). The results provide mixed support for the predicted IAR \times RISK interactions. The Hypothesis 2a results for oversight effectiveness in Table 2, Panel A (in appendix), indicate that the interaction between IAR disclosure and fraud risk is significant (p -value = 0.026, one-tailed). The slightly insignificant interaction (p -value = 0.145, one-tailed) for the financial reporting reliability measure provides negative support for Hypothesis 2b. The Table 2, Panel B (in appendix), results show similar cell mean patterns for both measures, with the No IAR/High Risk cells have lower confidence scores (oversight effectiveness mean = 36.71 and financial reporting reliability mean = 37.85) and the IAR/Low Risk cells have higher confidence scores (oversight effectiveness mean = 60 and financial reporting reliability mean = 53.94).

We used mediation analysis to test the Hypothesis 3 prediction that confidence in oversight effectiveness will mediate the IAR-confidence in financial reporting reliability relation and the Hypothesis 4a and Hypothesis 4b predictions that confidence in oversight effectiveness and financial reporting, respectively, will mediate the IAR-investment recommendation relation.

Following Baron and Kenny's (1986) three-step regression approach to test for mediation, we estimated the following three equations:

$$\text{MEDIATOR}_I = \alpha_0 + \alpha_1 \text{IV}_I + e_1 \quad (1)$$

$$\text{DV}_I = \beta_0 + \beta_1 \text{IV}_I + e_1 \quad (2)$$

$$\text{DV}_I = \delta_0 + \delta_1 \text{IV}_I + \delta_2 \text{MEDIATOR}_I + e_1 \quad (3)$$

For mediation to exist, the independent variable (IV) must first affect the mediator variable in equation (1) (i.e., α_1 must be statistically significant). Second, the independent variable must affect the dependent variable (DV) in equation (2) (i.e., β_1 must be statistically significant). Third, mediator must then affect the dependent variable in equation (3) (i.e., δ_2 must be statistically significant). In addition, the effect of the independent variable on the dependent variable must be less in equation (3) than in equation (2). The results in Table 3, Panel A and Figure 1, (in appendix) provide support for the Hypothesis 3 prediction that perceived oversight effectiveness will mediate the relation between IAR disclosure and confidence in financial reporting reliability. The equation (1) results indicate that IAR disclosure is positively related to investor perceptions of oversight effectiveness (p-value <0.001, one-tailed). In equation (2), we find that IAR disclosure is positively related to confidence in financial reporting reliability (p-value <0.001, one-tailed). Finally, the equation (3) results show that perceived oversight effectiveness is positively related to confidence in financial reporting reliability, even in the presence of IAR disclosure (p-value < 0.001, one-tailed). In addition, the effect of the IAR disclosure on confidence in financial reporting reliability is less in equation (3) ($\delta_1 = 6.3468$) than in equation (2) ($\beta_1 = 16.085$). The Sobel-Goodman test statistic provides evidence of mediation (p-value <.001, two-tailed).

The results in Panels B and C of Table 3 and Figure 1 (in appendix) provide support for the Hypothesis 4a and Hypothesis 4b predictions that confidence in oversight effectiveness and financial reporting reliability, respectively, will mediate the relation between IAR disclosure and investment recommendation. The equation (1) results indicate that IAR disclosure is positively related to confidence in oversight effectiveness and financial reporting reliability (one-tailed p-values <0.001 and <0.001, respectively). Next, the equation (2) results provide evidence that that IAR disclosure is positively related to the likelihood of investment recommendation (p-value < 0.001, one-tailed). The equation (3) results indicate that, in the presence of IAR disclosure, confidence in financial reporting reliability and oversight effectiveness are positively related to the likelihood of a investment recommendation (p-value = 0.008, 0.07, one-tailed) and that the effect of the IAR disclosure on the likelihood of investment recommendation is less in equation (3) ($\delta_1 = 9.68$ and 16.15 , respectively) than in equation (2) ($\beta_1 = 22$). Also the

Sobel-Goodman test statistics suggest mediation for both oversight effectiveness and financial reporting reliability (two-tailed p-values < 0.001 and $= 0.04$, respectively). Proportion of total effect mediated is 56.2% and 27% respectively.

Supplemental Analysis

We evaluated participant self-insight into report usefulness of reports given to participants to supplement the primary findings and provide additional evidence concerning IAR usefulness in comparison to Audit committee Report. The participants found the External Audit Report more useful than the IAR was. By comparison, in the case that did not include an IAR, participants found the External Audit Report to be significantly more useful than the other report. (p-value < 0.029 , two-tailed). In making their decision as participants assigned greater weight to EAR in no IAR case than when in IAR case. That means investors found audit committee report to be less useful than IAR given they have the same EAR

Discussion and Conclusion

This study reports the results of an experiment that examines whether a descriptive IAR affects investor confidence in oversight effectiveness and financial reporting reliability. The findings suggest that disclosing an IAR in addition to External Audit Report increases investor confidence in oversight effectiveness and financial reporting reliability. Furthermore, the IAR effect on confidence in oversight effectiveness is greater for high fraud risk companies than for low fraud risk factors. Mediation test results reveal that perceptions of oversight effectiveness mediate the relation between IAR disclosure and confidence in financial reporting. Furthermore, mediation analysis reveals that IAR disclosure affects the likelihood of recommending investment through the increases in investor confidence in oversight effectiveness and financial reporting reliability.

Supplemental analysis of participant self-insight into report usefulness reveals that the EAR was perceived to be more useful in decision-making when the Audit Committee Report was given than when IAR was given.

These findings have research and policy implications. From a research perspective, this study extends the internal audit and corporate governance literatures by providing evidence that increased transparency about the internal audit function affects investor confidence and decision making.

The findings also complement studies linking weak corporate governance with poor financial reporting quality (e.g., Dechow et al. 1996; Beasley et al. 2000) by providing experimental evidence that individual value increased transparency about a company's corporate governance when making investment decisions. While much of the current internal audit literature (e.g., Swanger and Chewning 2001; James 2003) examines individual perceptions of internal audit characteristics, external stakeholders typically lack information about the internal audit function.

This study provides initial evidence that increased internal audit transparency provides incremental usefulness to investors beyond current mandated governance disclosures.

From a policy perspective, this study's results are relevant for external regulators and for company directors, executives, and internal auditors. For example, the findings are relevant for regulators considering the internal audit function and prospective internal audit disclosure requirements in their corporate governance guidelines. Despite the initiatives by BSEC to incorporate new conditions in the guideline to ensure transparency in the activities of the listed companies, the current regulatory environment lacks requirements related to internal audit disclosures to external stakeholders. Our results provide evidence on the potential benefits of descriptive internal audit disclosures in an environment where demand for public and private sector accountability is on the rise.

From a company perspective, the study's results highlight the potential for companies to increase external stakeholder confidence in company financial reporting oversight and reliability by voluntarily describing internal audit composition, responsibilities, and activities. These findings are particularly relevant given questions about whether additional disclosure will lead to increased legal exposure (e.g., Kintzele 1991; Krishnan and Zhang 2005) or investor information overload (e.g., Case 2006).

We highlight several limitations when considering the study's implications. First, we recognize that risk attitude has only been subjectively measured. We believe risk tolerance is more than a function of psychological makeup; it is affected by individual's family situation. Fortunately, the participants were of the same average income group. Second we recognize the inherent lack of control associated with survey based experimentation. While the participants were given explicit instructions not to consult with any of their peers, the possibility exists that the study's manipulations could have been revealed to participants through consultation with other participants. Third, the background financial information and reports provided in the experimental instrument represented only a subset of information disclosed by companies to fulfill SEC reporting requirements. Fourth, we recognize that this study focuses primarily on the potential benefits of IAR disclosure to nonprofessional investors. Additional research is needed to

evaluate the generalize ability of the results to other external stakeholders (e.g., professional investors). Finally, the IAR in this study described a relatively effective internal audit function (IAR in case of low risk being the most effective of the two) and provided no opinion for readers to consider. Accordingly, additional research is needed to determine how investor confidence and decisions are affected by varying the amounts and types of information presented in these reports.

Future research is also needed to evaluate specific IAR-related costs and benefits for internal stakeholders (e.g., internal auditors, management) in both voluntary and mandatory environments to provide a more comprehensive assessment of this disclosure.

References

- Aaker, D. A., R. Batra, and Myers, J. G. (1992). *Advertising Management*. 4th ed. Englewood Cliffs, NJ: Prentice Hall.
- Ahmed G. T., August 25, 2013. Non-compliance firms to be barred from issuing rights offers. *The Daily Star*: B1.
- Agrawal, A. and Chadha, S. (2005). Corporate governance and accounting scandals. *Journal of Law and Economics* (48): 371-406.
- Anderson, N. H. (1991). *Contributions to Information Integration Theory*. Volume II: Social. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bailey, A. D., Gramling, A. A., and Ramamoorti, S. (2003). *Research Opportunities in Internal Auditing*. Altamonte Springs, FL: The IIA Research Foundation.
- Baron, R. M. and Kenny, D. A. (1986). *The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations*. *Journal of Personality and Social Psychology* 51 (6): 1173-1182.
- Beasley, M., J. Carcello, D. Hermanson, and Lapides, P. D. (2000). Fraudulent financial reporting: Consideration of industry traits and corporate governance mechanisms. *Accounting Horizons* (December): 441-454.
- Birnbaum, M., Wong, R. and Wong, L. (1976). Combining information from sources that vary in credibility. *Memory and Cognition* 4: 330-336.
- _____ and Stegner, S. E. (1979). Source credibility in social judgments: Bias, expertise, and the judge's point of view. *Journal of Personality and Social Psychology* 37: 48-74.
- Brigham, E. F. and Houston, J. F. (1998). *Fundamentals of Financial Management*. Fort Worth, TX: Harcourt Brace College Publishers.
- Case, D. O. (2006). *Looking for Information: A Survey of Research on Information Seeking, Needs, and Behavior*, 2e. Oxford, UK: Elsevier, Ltd.
- Carcello, J. V., Hermanson, D. R., and Neal, T. L. (2002). Disclosures in audit committee charters and reports. *Accounting Horizons* 16(4): 291-304.

- Chung, K. H., Elder, J. and Kim, J.C. "Corporate Governance and Liquidity." *Journal of Financial and Quantitative Analysis* 45 (April 2010): 265-291.
- Cohen, J., Krishnamoorthy, G. and Wright, A. (2004). The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature* 23: 87-152.
- Dechow, P. M., Sloan, R. G. and Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research* (Spring): 1-36.
- Deloitte. (2005). *Optimizing the role of internal audit in the Sarbanes-Oxley era*.
- DeZoort, F. T., Houston, R. W. and Peters, M. F. (2001). The impact of internal auditor compensation and role on auditors' planning judgments and decisions. *Contemporary Accounting Research* (Summer): 257-281.
- Ernst & Young. (2010). *Unlocking the strategic value of Internal Audit*.
- Easley, D. and O'Hara, M. (2004). Information and the cost of capital. *Journal of Finance* 59(4):1553-1583.
- Elliott, R. K. and Jacobson, P. D. (1994). Costs and benefits of business information disclosure. *Accounting Horizons* 8 (4): 80-96.
- Elliott, W. B. (2006). Are investors influenced by pro forma emphasis and reconciliations in earnings announcements? *The Accounting Review* 81 (1): 113-133.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Francis J., LaFond R., Olsson, P. and Schipper, K. (2005). The market pricing of accruals quality. *Journal of Accounting and Economics* 39(2): 295-327.
- Gadziala, M. A. (2005). Integrating auditing and compliance disciplines within the risk management framework. Speech at Compliance '05 USA, November 30. Available at: <http://www.sec.gov/news/speech/spch113005mag.htm>.
- Garboua, L. L., Blondel, S. (2002). On the Rationality of Cognitive Dissonance. *The Expansion of Economics: Towards an Inclusive Social Science*, S. Grossbard-Schechtman et C. Clague (eds), ME Sharpe, Inc.
- Gordon, L. A. and Smith, K. J. (1992). Post auditing capital expenditures and firm performance. *Accounting, Organizations and Society* (November): 741-757.
- Gramling, A. A., Marletta, M. J. and Church, B. K. (2004). The role of the internal audit function in corporate governance: A synthesis of the extant internal audit literature and directions for future research. *Journal of Accounting Literature* 23: 194-244.
- Greenspan, J. W., Burns, D. C. and Lightie, S. (1994). Gauging the internal auditor's responsibility: The case of a tender offer. *Auditing: A Journal of Practice & Theory* 13 (Fall): 77-85.
- Hamilton, R. E. and Wright, W. F. (1982). Internal control judgments and effects of experience: Replications and extensions. *Journal of Accounting Research*: 756-765.
- Harrington, C. (2004). Internal Audit's New Role. *Journal of Accountancy* 198 (3): 65-70.
- Healy, P. M., Hutton, A. P. and Palepu, K. G. (1999). Stock performance and intermediation changes surrounding sustained increases in disclosure. *Contemporary Accounting Research* 16 (3): 485-520.

- Herdman, R. (2002). Making audit committees more effective. Speech at Tulane Corporate Law Institute, March 10. Available at: <http://www.sec.gov/news/speech/spch543.htm>.
- Hodge, F. D. (2001). Hyper linking unaudited information to audited financial statements: Effects on investor judgments. *The Accounting Review* (October): 670-691.
- Holt, T. and DeZoort, T. (2009). The effects of internal audit report disclosure on investor confidence and decisions. *International Journal of Auditing* (March): 61-77.
- Hovland, C. I., Janis, I. L. and Kelley, H. H. (1953). *Communication and Persuasion*. New Haven, CT: Yale University Press.
- Institute of Internal Auditors (IIA). (2003). *International standards for the professional practice of internal auditing*. Altamonte Springs, FL. http://www.theiia.org/ecm/guideframe.cfm?doc_id=1499.
- Institute of Internal Auditors Research Foundation (IIARF). September 2002. The IIA Research Foundation Report. FL. <http://www.theiia.org/RFR/index.cfm?act=RFR.printi&iid=86&aid=342>.
- James, K. (2003). The effects of internal audit structure and perceived financial statement Fraud intervention. *Accounting Horizons* (December): 301-327.
- Kahlor, L., Dunwoody, S., Griffin, R. J. and Neuwirth, K. (2006). Seeking and processing information about impersonal risk. *Science Communication* (December): 163-194.
- Kintzele, M. R. (1991). The use of audit committee reports in financial reporting. *Internal Auditing* (Spring): 16-24.
- Klein, A. (2002). Audit committees, board of director characteristics and earnings management. *Journal of Accounting and Economics* (33): 375-400.
- KPMG. (2010). *Fraud and misconduct survey 2010: Australia and New Zealand*
- Krishnan, J. (2005). A udit committee quality and internal control: An empirical analysis. *The Accounting Review* (April): 649-675.
- Libby, R. (1979). Bankers' and auditors' perceptions of the message communicated by the audit report. *Journal of Accounting Research* 17 (Spring): 98-122.
- Lowe, D. J., Geiger, M. A. and Pany, K. J. (1999). The effects of internal audit outsourcing on perceived external auditor independence. *Auditing: A Journal of Practice & Theory* (Supplement): 7-26.
- MacKinnon, D., Lockwood, C., Hoffman, J., West, S. and Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods* 7(1): 83-104.
- McGuire, W. (1974). Psychological motives and communication gratification. In *The Uses of Mass Communication: Current Perspectives on Gratifications Research*, edited by J. Blumler and E. Katz, 167-198. Beverly Hills, CA: Sage.
- Mear, R. and Firth, M. (1987). Cue usage and self-insight of financial analysts. *The Accounting Review* 62(1): 176-182.
- Pany, K. and Smith, C. (1982). Auditor association with quarterly financial information: An empirical test. *Journal of Accounting Research* (Autumn): 472-481.

- Prawitt, D. F., Smith, J. L. and Wood, D. A. (2006). Internal audit function characteristics and earnings management. Working paper, Brigham Young University (July).
- Reily and Brown (2006). *Investment and Portfolio Analysis* 8th ed. Thompson: 46-47.
- Richards, L. A. (2002). Remarks at the 2002 Internal Auditors Division Annual Conference. Speech from Tempe, AZ, October 15. Available at: <http://www.sec.gov/news/speech/spch591.htm>.
- Saha, K. (2011). Management Disclosures on Internal Control in Annual Reports-Bangladesh Perspective. *International Journal of Economics and Finance*, 3-4.
- Schneider, A. and Wilmer, N. (1990). A test of audit deterrence to financial reporting irregularities using randomized response technique. *The Accounting Review* 65 (3): 668-681.
- Schweitzer, D. and Ginsburg, G. P. (1966). Factors of communicator credibility. In C. W. Backman and P. R. Secord (Eds.), *Problems in social psychology: Selected readings*. New York: McGraw-Hill, 1966.
- Spira, L. F. and Page, M. (2003). Risk management: The reinvention of internal control and the changing role of internal audit, *Accounting, Auditing & Accountability Journal*, Vol. 16 Iss: 4, pp. 640 – 661.
- Srinivasan, S. (2005). Consequences of financial reporting failure for outside directors: Evidence from accounting restatements and audit committee members. *Journal of Accounting Research* (43): 291-334.
- Swanger, S. L. and Chewning, E. G. Jr. (2001). The effect of internal audit outsourcing on financial analysts' perceptions of external auditor independence. *Auditing: A Journal of Practice & Theory* 20 (September): 115-129.
- Taylor, A., MacKinnon, D. and Tein, J. (2007). Tests of the three-path mediated effect. Working paper, Arizona State University.
- Travis P. Holt. (2012). The effects of internal audit role and reporting relationships on investor perceptions of disclosure credibility, *Managerial Auditing Journal*, Vol. 27(9), pp. 878 - 898
- Wallsten, T. S. (1977). Processing information for decisions. In N. J. Castellan, D. Pisoni, & G.Potts (Eds.), *Cognitive Theory, Vol. II*. Potomac, MD: Lawrence Erlbaum, pp. 87-116.
- _____. 1980. Processes and models to describe choice and inference. In T. S. Wallsten (Ed.), *Cognitive processes in choice and decision behavior*. Hillsdale, NJ: Lawrence Erlbaum, pp. 215-238.
- Walster, E., Aronson, E. and Abrahams, D. (1966). On increasing the persuasiveness of a low prestige communicator. *Journal of Experimental Psychology* 2: 325-342.
- Wang, D. (2006). Founding family ownership and earnings quality. *Journal of Accounting Research* (44): 619-656.
- Watts, R., and Zimmerman, J. (1986). *Positive Accounting Theory*. Upper Saddle River, NJ: Prentice-Hall.
- Wilks, T. J. and Zimbelman, M. F. (2004). Decomposition of fraud-risk assessments and auditors' sensitivity to fraud cues. *Contemporary Accounting Research* 21(3): 719-745.

Wilson, T. and Walsh, C. (1996). *Information Behaviour: An Interdisciplinary Perspective*. Wetherby, West Yorkshire, UK: The British Library Board.

Appendix

Case materials

Panel A: Low risk case

You are given the audited financial statements of a renowned company, ABC Ltd. Assume that you are a member of middle class family and you are going to advise your family member on whether to invest Tk. 50,000 in ABC Company's stock.

ABC Ltd. is a publicly traded company that manufactures and distributes construction materials to other firms. It has just completed its fiscal year. Your initial analysis on the company reveals that:

- Management compensation was not closely tied to meeting analysts' forecasts,
- Earnings in the prior year have remained relatively stable over all 4 quarters,
- The company has performed consistent with analysts' consensus earnings forecasts,

Panel B: High risk case

You are given the audited financial statements of a renowned company, ABC Ltd. Assume that you are a member of middle class family and you are going to advise your family member on whether to invest Tk. 50,000 in ABC Company's stock.

ABC Ltd. is a publicly traded pharmaceutical company that manufactures and distributes construction materials to other firms. It has just completed its fiscal year. Your initial analysis on the company reveals that:

- Management compensation was closely tied to meeting analysts' forecasts,
- In spite of sluggish profit in the first 3 quarters of the past year, the company managed to just meet the analysts' consensus earnings forecasts, by posting record profit in the 4th quarter.
- In the recent years company had a high rate of management turnover,

- The company has increased its R & D expenditure recently.

Panel C: The Audit Committee Report

The Audit Committee of the Company is comprised of the following Directors; The Company Secretary, who attends the Committee's meetings as the Secretary of the Committee, extends support to the Audit Committee.

The Audit Committee has been guided by the Audit Committee Charter approved by the Board of Directors. The Audit Committee's role flows directly from the Board's oversight function and it is authorized by the Board to investigate any activity within its Charter. The Committee's main responsibilities include:

- Reviewing the company's financial statements;
- Reviewing and monitoring the effectiveness of the external and internal audit activities;
- Reviewing the adequacy and effectiveness of the existing internal control and risk management system;
- Reviewing and monitoring the company's ethical standard for ensuring compliance with regulatory and financial reporting requirements and its relationship with the relevant regulatory authorities.

The Committee opines that proper internal control and process are in place to provide reasonable assurance that the Company's assets are safeguarded and that the financial position of the Company is properly disclosed in the financial statements.

On behalf of the Audit Committee;

Ragy Soliman

Chairman

Audit Committee

Panel D: IAR in low risk case

Scope and objective:

General control objective for the audit were to provide reasonable assurance that:

- Financial transactions are reasonable and appropriate.
- To determine whether controls over operations provide managers with reasonable assurance that resources are used efficiently and economically.
- To determine whether controls over compliance with policies, procedures, plans, laws and regulations provide managers with reasonable assurance that proper compliance actually occurs.

Statement of auditing standards:

The audit is conducted in accordance with the International Auditing standards for the Professional Practice of Internal Auditing. We believe that our audit provides a reasonable basis for our conclusion.

Accountability:

The independence of the Internal Audit Department is established by the Company's organizational and reporting structure. The charter of internal audit department specifies a dual reporting relationship where we report to the audit committee and CEO.

Audit opinion:

Based on the work the Department has completed during the course of the year we have concluded that ABC's control environment is adequate for its business needs and operates in an effective manner.

Opportunities to enhance control are included in the summary of the audit findings.

Summary of audit findings:

Findings # 01 Control issues in Information governance

Condition

Out of five interim audits, two interim audits performed with 'poorly controlled' conclusions both related to areas of IM governance. This continues to be an area in which we identify a significant number of control issues and will continue to be an important area of focus for our work.

Recommendation:

IM are currently working to address these issues and a follow-up audit to confirm that the issues reported by us have been satisfactorily addressed will be carried out later this year.

Effect:

This continues to be an area in which we identify a significant number of control issues and will continue to be an important area of focus for our work.

Findings # 02 Security of laptop computers

Condition:

One of the audit reports rated as 'Poorly controlled was in respect of 'Security of Laptop Computers'. The report identified that there was no up-to-date and consistent register of laptops.

Effect: It raised a number of other significant control issues.

Panel E: IAR in high risk case

Scope and objective:

General control objective for the audit were to provide reasonable assurance that:

- Financial transactions are reasonable and appropriate.
- To determine whether controls over operations provide managers with reasonable assurance that resources are used efficiently and economically.
- To determine whether controls over compliance with policies, procedures, plans, laws and regulations provide managers with reasonable assurance that proper compliance actually occurs.

Statement of auditing standards:

The audit is conducted in accordance with the International Auditing standards for the Professional Practice of Internal Auditing. We believe that our audit provides a reasonable basis for our conclusion.

Accountability:

The independence of the Internal Audit Department is established by the Company's organizational and reporting structure. The charter of internal audit department specifies a dual reporting relationship where we report to the audit committee and CEO.

Audit opinion:

In our opinion the audit report the controls and procedures did not provide reasonable assurance that the general control objectives were being met. Opportunities to enhance control are included in the summary of the audit findings.

Summary of audit findings:

01 Finding: Information technology control issues

Condition:

The company does not have any IT security policy, system back up policy & does not keep any log of IT computer service activity.

Effect:

The above mentioned IT controls create an environment wherein management cannot have reasonable assurance of effective IT security.

Recommendation:

The board should develop written policies to address these issues.

02 finding: Purchasing guidelines need clarification

Condition:

Purchases are not being done following executive directors written approval, which is the policy of the company.

Effect:

A lack of purchasing guidelines created an environment where the employees may be uncertain of their responsibilities and authority regarding purchasing activity.

Recommendation:

There must be purchasing policies that clarifies purchasing roles and responsibilities and approval of authorities.

03 finding: questionable expenditures noted in general ledger**Condition:**

A random sample of expenditure was added in the ledger totaling 2, 00,000 taka under the criteria gift and food, whose business purpose was questionable.

Effect:

Expenditure without a clearly beneficial business purpose does not does not reflect a prudent use of fund.

Recommendation:

The board should develop a policy that clearly establishes a acceptable use of fund for items such as gift and food. Gifts should incur minimal cost.

Endnotes

1. We use a descriptive IAR rather than an opinion-based IAR in this study for two reasons. First, given the wide variety of financial, compliance, and operational duties that internal auditors perform, we believe that additional research is needed before specifying an opinion domain (or domains) in a formal report to external stakeholders. Second, concerns about increased legal exposure (e.g., Kintzele 1991; Krishnan and Zhang 2005) make opinion-based IARs seem unlikely in the absence of specific regulation formally requiring an opinion.

2. Work of the Internal Audit Department and results of each audit are generally confidential to the company and are not disclosed to third parties, except to the external auditors, unless by the consent of Executive Director /Managing Director and/ or the Chair of the Audit Committee.

3. The information behavior paradigm provides various explanations for why individuals will seek credible information to rely upon when faced with uncertainty. For example, dissonance theory (e.g., Festinger 1957; Plous 1993) focuses on individuals' efforts to reduce psychological tension and discomfort experienced when faced with uncertainty in decision-making. Alternatively, pressure theory (e.g., Elliot and Eisdorfer 1982) focuses more on information search as a means for coping with stress created by uncertainty. Brigham and Houston (1998, 122) define investment risk as “the chance that an investment will not provide the expected return”. Francis et al. (2005, 296) define information risk as “the likelihood that firm-specific information that is pertinent to investor pricing decisions is of poor quality”.

4. Carcello et al. (2002) noted that Audit Committee Reports may be an indirect source of information about the internal audit function (e.g., private meetings between the audit committee and internal auditor or audit committee review of internal audit activities). However, they found that the vast majority of reviewed reports contained no such information. Accordingly, the Audit Committee Report which is used in IAR disclosure manipulation in our study includes only minimal reference to internal auditing.

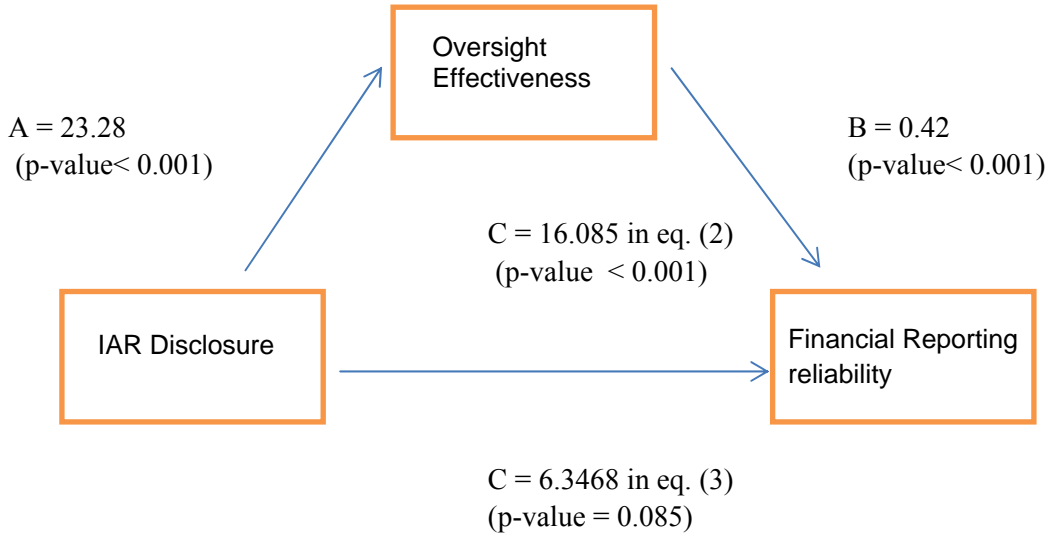
5. The IAR x RISK interaction results for financial reporting reliability are similar when freedom from fraud and freedom from error are considered separately (one-tailed p value = 0.15 and 0.35, respectively).

6. The Sobel test statistic is designed to test whether a mediator carries the influence from the independent variable to the dependent variable (Baron and Kenny 1986).

FIGURE 1

Mediation models

Panel A: Observed Mediation Model for Hypothesis 3*



Panel B: Observed mediation model for Hypothesis 4a

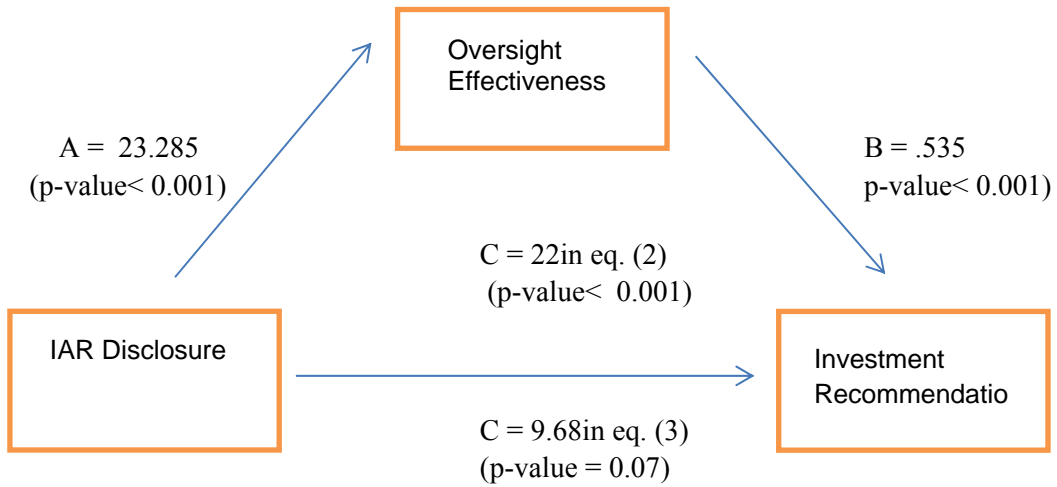
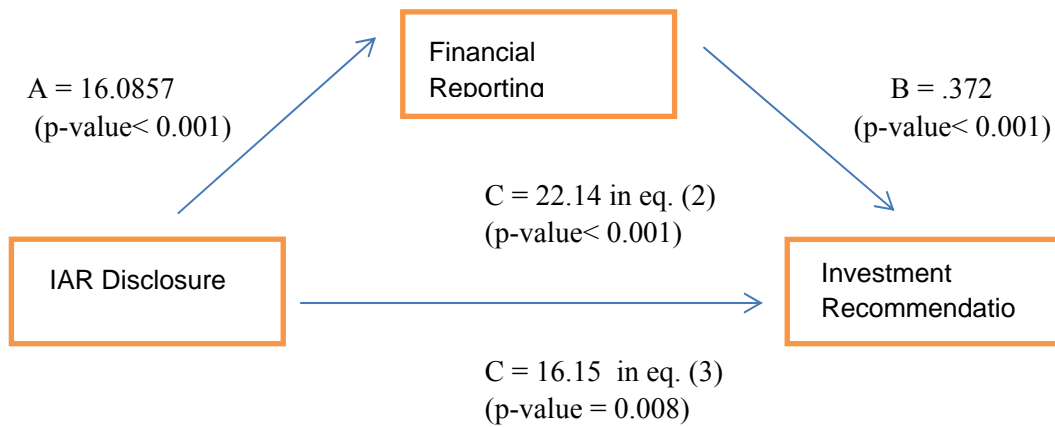


Figure 1 (cont.)

Mediation models

Panel C: Observed Mediation Model for Hypothesis 4b



* Reported p-values signify one-tail significance levels for the test variables in the predicted direction.

Table 1

Demographic information

	NO IAR Low risk	NO IAR High risk	IAR Low risk	IAR High risk	STUDY TOTAL
Group size	18	17	17	18	70
Highest degree attained					
Masters	0%	0%	0%	0%	0%
Bachelor	0%	0%	0%	0%	0%
Undergrad	100%	100%	100%	100%	100%
Total	100%	100%	100%	100%	100%
Gender					
Male	40%	50%	30%	50%	43%
Female	60%	50%	70%	50%	57%
Total	100%	100%	100%	100%	100%

AGE					
Mean	22	21	22	23	22
% who have invested in stocks	nil	nil	nil	nil	nil
% who have read a company's annual report	100%	100%	100%	100%	100%

Primary Analyses

Table 2

Oversight effectiveness and financial reporting reliability results

Panel A: ANOVAs for oversight effectiveness* and financial reporting reliability†

	Oversight effectiveness			Financial reporting reliability		
source	hypothesis	F value	P value‡	hypothesis	F value	P value‡
Test variable						
Risk		28.99	<.001		7.01	0.01
IAR	H1a	30.06	<.001	H1b	19.33	<.001
Risk X IAR	H2a	5.02	0.026	H2b	2.16	0.145

Panel B: descriptive statistics, Oversight effectiveness

	NO IAR			IAR		
	Low Risk	High Risk	Total	Low risk	High risk	Total
Mean	51.94444	20.58824	36.71429	70.58824	50	60
SD	19.41337	18.19017	24.43307	13.21485	17.14986	18.39117
n	18	17	35	17	18	35

Descriptive statistics, financial reporting reliability

	NO IAR			IAR		
	Low risk	High risk	Total	Low risk	High risk	Total
Mean	43.75	31.61765	37.85714	58.11765	50	53.94
SD	24.15	17.74254	17.54346	15.05462	12.86239	14.36385
N	18	17	35	17	18	35

* Participants provided their assessments of company oversight effectiveness using scales anchored 0 = “not at all effective” and 100 = “extremely effective”.

† Participants provided their financial reporting confidence assessments using 100-point scales with endpoints labeled 0 = “not at all confident” and 100 = “extremely confident”.

‡ Reported p-values signify one-tailed significance levels for the test variables. Significant p-values are in bold.

Variable Coding:

RISK = 0 for low fraud risk company and = 1 for high fraud risk company;

IAR = 0 for inclusion of Audit Committee Report and = 1 for inclusion of Internal Audit Report

Table 3

Mediation test results

Panel A: Regression results for Hypothesis 3 - oversight effectiveness (OVRSGHT) mediation of IAR-financial reporting reliability (FRR) relation

Equation	Dependent variable		Intercept	IAR	OVRSGHT	F-value	Adj. R2
		Coefficient	36.71429	23.28571			
1	OVRSGHT	Std. error	3.655153	5.169167		<.001	0.2185
		p-value*	<.001	<.001			
		Coefficient	37.85714	16.08571			

2	FRR	Std. error	2.7100	3.83254		<.001	0.1941
		p-value*	<.001	<.001			
		Coefficient	22.50207	6.3468	.41823		
3	FRR	Std. error	3.5527	3.63278	.07479	<.001	0.4423
		p-value*	<.001	0.085	<.001		

Sobel test statistic for mediation: $z = 3.508$, $p\text{-value} < 0.001$ (two-tailed)

Proportion of total effect that is mediated: 60.5%

Mediation test results (cont.)

Panel B: Regression results for Hypothesis 4a - OVRSGHT mediation of IAR-investment recommendation (REC) relation

Equation	Dependent variable		Intercept	IAR	OVRSGHT	F-value	Adj. R2
		Coefficient	36.71429	23.28571			
1	OVRSGHT	Std. error	3.655153	5.169167		<.001	0.2185
		p-value*	<.001	<.001			
		Coefficient	39.285	22.14			
2	REC	Std. error	3.007	5.338		<.001	0.187
		p-value*	<.001	<.001			
		Coefficient	19.63	9.68	.535		
3	REC	Std. error	5.1861	5.371	.1023	<.001	0.39
		p-value*	0.049	0.07	<.001		

Sobel test statistic for mediation: $z = 3.316$, $p\text{-value} < .001$ (two-tailed)

Proportion of total effect that is mediated: 56.2%

Panel C: Regression results for Hypothesis 4b – FRR mediation of IAR-REC relation

Equation	Dependent variable		Intercept	IAR	FRR	F-value	Adj. R2
		Coefficient	37.857	16.085			
1	FRR	Std. error	2.710	3.83		<.001	0.205
		p-value*	<.001	<.001			
		Coefficient	39.28	22.14			
2	REC	Std. error	3.809	5.38		<.001	0.19
		p-value*	<.001	<.001			
		Coefficient	25.19	16.15	.372		
3	REC	Std. error	7.279	5.87	.165	<.001	0.23
		p-value*	0.001	0.008	0.028		

Sobel test statistic for mediation: $z = 1.982$, $p\text{-value} = 0.04$ (two-tailed)

Proportion of total effect that is mediated: 27%

*Reported p-values signify one-tailed significance levels for the test variables in the predicted direction; otherwise two-tailed.

Table 4

Supplemental Results

Panel A: Self-insight

		IAR	NO IAR	t-value	p-value
External Audit Report	Mean	60.057	66.028	1.919	0.029
	SD	13.17	12.853		
Internal audit Report	Mean	40			
	SD	13.17			
Audit Committee Report	Mean		34		
	SD		12.37		

Self-insight into report usefulness was measured by asking, “How useful was the following information in developing responses to the preceding questions?” Participants were asked to “allocate 100 points among the reports based upon their usefulness.