

THE JOINT EFFECT OF EXPRESSED USER CONCERN AND AUTHORITATIVE  
GUIDANCE ON MANAGERIAL DETERMINATIONS OF MATERIALITY

By

EDWARD THOMAS

A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL  
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

2017

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**To Danielle, for all of her encouragement and enthusiasm**

## ACKNOWLEDGMENTS

I would like to thank Steve Asare for providing me with tremendous guidance and feedback throughout this process. I also express my gratitude to the other members of my dissertation committee for their valuable observations and perspectives: Robert Knechel, Kathy Rupar, and Amir Erez. I also thank the workshop participants at the University of Florida, Mercer University, and the University of Central Florida for helpful comments and suggestions.

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Abstract of Dissertation Presented to the Graduate School  
of the University of Florida in Partial Fulfillment of the  
Requirements for the Degree of Doctor of Philosophy

THE JOINT EFFECT OF EXPRESSED USER CONCERN AND AUTHORITATIVE  
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By

Edward Thomas

December 2017

Chair: Steven Asare

Major: Business Administration

Regulators are concerned that managers rely solely on rule of thumb quantitative thresholds (such as 5% of net income), rather than users' disclosure needs, when determining the materiality of financial disclosures. I evaluate the efficacy of the current authoritative guidance on qualitative materiality and managements' interaction with users as mechanisms to align managers' materiality judgments and users' disclosures needs. In my first experiment, I find that, in the absence of authoritative guidance, managers judge a misstatement to be more (less) material when their interaction with users indicate that users consider (do not consider) the related financial statement item to be important to their uses. However, in the presence of the current authoritative guidance, managers assess the misstatement to be more material even when their interactions with users indicate that users do not consider the financial statement item to be important to their uses. The results are consistent with the theory that managers respond to authoritative guidance with a compliance mentality that focuses on the perceived preferences of regulators and other authoritative bodies rather than the expressed concerns of users. In my second experiment, I investigate two alternative approaches to authoritative guidance – a process-oriented approach and a disclosure-oriented approach -- that may improve the responsiveness of managers to the expressed concerns of users. The experimental results support

the effectiveness of a process-oriented approach to authoritative guidance (relative to current guidance) but do not support the effectiveness of a disclosure-oriented approach to authoritative guidance (relative to current guidance). This dissertation contributes to our understanding of managers' materiality judgments and the findings suggest that alternative forms of authoritative guidance on qualitative materiality may be desirable.

## CHAPTER 1 INTRODUCTION

Accounting standards often require managers' disclosure decisions to be underpinned by what they consider to be material to the users of those disclosures. Nevertheless, extant research supports the conclusion that both managers and auditors rely on conventional rules of thumb, such as five percent of net income, to create thresholds for materiality (Messier, Martinov-Bennie, & Eilifsen 2005; Eilifsen & Messier 2014). These quantitative rules of thumb, however, do not enjoy the official sanction of the accounting profession, regulatory bodies, or the judiciary (Liu & Mittelstadt 2002; Edgley 2014) and may not reflect users' disclosure needs. The concern is that, while bright-line rules of thumb can ease the work of the preparers and auditors of financial information, operationalizing materiality in such a mechanical way leads to omissions or misstatements of financial information (either inadvertently or opportunistically) that would impact user decision-making. Indeed, both the accounting profession and regulators have warned practitioners against neglecting the qualitative nature of materiality considerations and have offered guidance on when qualitative considerations might be particularly relevant (SEC 1999; AICPA 2006; PCAOB 2010a).

In Chapter 2, I examine the joint effect of two mechanisms that may affect a manager's propensity to factor in qualitative considerations when making determinations about materiality. One mechanism is a manager's direct communication with users. Managers of publicly traded firms have regular direct interactions with financial information users during conference calls (Mayew 2008), conference presentations (Bushee, Jung & Miller 2011, 2013), analyst/investor days (Kirk & Markov 2016) and private events (Soltes 2014; Brown, Call, Clement & Sharp 2015). While accounting research has focused on how these interactions affect users' decision-making, it is likely that information is flowing in both directions. Organizational research shows

that an effective way to disrupt the assumptions an organization makes about the needs of others is to have direct contact with groups outside of the organization (Dougherty 1992; Mohrman, Gibson & Mohrman 2001).

Another relevant mechanism that might affect a manager's materiality judgments is the current authoritative guidance on materiality. It might be expected that the current authoritative guidance would lead managers to be more sensitive to the needs of users by reminding managers that the material accuracy of financial disclosures is ultimately related to whether an error in financial disclosures would affect the total mix of available information to users (Oesterle 2011; PCAOB 2010b) or the economic decision-making of users (FASB 2010). However, research and reports from a broad range of business areas indicate that managers are prone to react to authoritative guidance with a compliance mentality that leads them to be more responsive to what they perceive to be the expectations of authoritative bodies (such as the accounting profession and regulators) than to other signals from the business environment, even when the intent of guidance is to make them more sensitive to these signals (Tarullo 2014; Gunningham 1999; Sluyter 1998; Gunningham, Thornton & Kagan 2005).

Accordingly, I predict that, in the absence of authoritative guidance, managers will have lower (higher) materiality thresholds for misstatements in disclosures when managers believe, through direct interaction with users, that users consider (do not consider) those disclosures to be important to their uses. I also predict that these managers will be more (less) likely to reissue financial statements that contain such misstatements when managers believe, through direct interaction with users, that users consider (do not consider) those disclosures to be important to their uses.

In the presence of the current authoritative guidance, however, I predict that a compliance mentality in managers will create a substitution effect such that a sensitivity to the perceived expectations of authoritative bodies simply replaces the sensitivity arising from knowing that certain disclosures are important to users. In other words, managers exposed to the current authoritative guidance will have lower materiality thresholds (due to the perception that this is what authoritative bodies expect), but the effect of a knowledge of user concerns will be significantly diminished. Audit research has documented a similar substitution effect between authoritative guidance and other factors that affect qualitative materiality considerations among auditors (Ng & Tan 2003, 2007; Ng 2007).

To test these expectations, I conducted a between-subjects experiment where I crossed two levels of expressed user concern for a financial disclosure (high, low) with two levels of authoritative guidance (current guidance, no guidance). Participants were asked to assume the role of a CFO who discovers a misstatement in the financial statements that falls below the threshold of a quantitative rule of thumb but may still be considered material based upon qualitative considerations. Participants were asked how material they consider the misstatement to be and the likelihood that they would restate the financial statements

I find that, as predicted, there is an interaction between expressed user concern for a financial disclosure and authoritative guidance. In the absence of authoritative guidance, managers who believe that users consider a certain disclosure to be important to their uses judge a misstatement in that disclosure to be more material and are more likely to reissue financial statements that contain the misstatement than do managers who believe that users do not consider the disclosure to be important to their uses. In the presence of the current authoritative guidance, however, managers assess materiality and the likelihood of restating at relatively high

levels even when they do not believe that users consider the disclosure to be important to their uses.

In Chapter 3, I investigate the following research question: can regulators provide guidance on materiality to managers in a way that will mitigate the effects of managers' compliance mentality? This question is important because, while accounting authorities clearly wish to provide guidance to managers, they do not intend their guidance to supplant the consideration of users' disclosure needs (SEC 1999; AICPA 2006; PCAOB 2010a). In essence, then, the research question boils down to whether authorities can provide a signal to managers (i.e., the qualitative considerations that authorities want to make salient to managers) that does not eliminate the consideration of users' disclosure needs.

Determining the materiality of financial disclosures is an ill-structured problem (Krogstad, Ettenson & Shanteau 1984; Abdolmohammadi & Wright 1987; Carpenter & Dirsmith 1992). Ill-structured problems have the following characteristics: (a) there is no definitive formulation of the problem and (b) there is no definitive solution to the problem (Rittel & Weber 1973; Simon 1973). Ill-structured problems pose problem solvers with a task that is both cognitively demanding and whose solution is always susceptible to criticism from others. Accordingly, it is common for problem solvers to reduce ill-structured problems to well-structured problems that can be more readily solved and justified (Carpenter & Dirsmith 1992; Hopkins 2011). Both quantitative rules of thumb and a compliance mentality can be understood in this way. However, reducing an ill-structured problem to a well-structured problem undermines the use of professional judgment and increases the likelihood that the solutions reached are not entirely appropriate to the original (ill-structured) problem.

Regarding guidance on qualitative materiality, the current approach taken by authoritative bodies (such as the FASB, the PCAOB, and the SEC) consists primarily of two elements: reminders of the definition of materiality and lists of situations where quantitative rules of thumb for determining materiality may be inappropriate. Current authoritative guidance relies on managerial judgment when determining materiality, but the evidence from the experiment in Chapter 2 indicates that managers anchor on what managers perceive to be the preferences of the authoritative bodies. In Chapter 3, I investigate two alternative forms of authoritative guidance intended to improve managers' responsiveness to expressed user concern.

The first form of alternative guidance (which I will call "process-oriented") would provide structure to managers for the process of making materiality judgments, with the structure being based on techniques for solving ill-structured problems. A process-oriented authoritative guidance might improve managers' responsiveness to expressed user concern for two reasons. First, by demanding compliance with a process, rather than an outcome, managers may feel that they have satisfied authorities by performing the process rather than arriving at an outcome perceived to be favored by authorities. When regulators act by facilitating the decision-making among stakeholders ("reflexive regulation") rather than by specifying performance outcomes ("command and control regulation"), managers arrive at solutions that achieve larger social objectives through utilizing information that regulators do not possess (McCrudden 2007; Hepple 2011; Gunningham 2015). Second, a regulatory process that directs managers to problem-solve materiality as an ill-structured problem may reduce their likelihood of relying on simpler heuristics, such as quantitative rules of thumb or the perceived expectations of regulators. Research indicates that prompting ("scaffolding") individuals to follow the proper steps for solving ill-structured problems improves their performance (Cho & Jonassen 2002; Ge

& Land 2003, 2004; Chen & Bradshaw 2007). Accordingly, I hypothesize that the effect of expressed user concern on managerial determinations of materiality will be greater under a process-oriented authoritative guidance that governs the process of decision-making than the current authoritative guidance.

The second form of alternative guidance (which I will call “disclosure-oriented”) would require managers to disclose all non-trivial misstatements that have been identified in previously issued financial statements. This form of guidance follows a common approach in securities regulation of allowing parties to engage in possible conflicts of interest but requiring disclosures that would make those conflicts of interest more publicly visible such that investors and other stakeholders can decide for themselves how to weight those conflicts of interest (Mahoney 1995). Disclosure-oriented regulations have been shown to reduce agency costs (Mahoney 1995; Healy & Palepu 2001) and to better align managerial decision-making with public interests (Weil et al 2006; Chatterji & Toffel 2010). A disclosure-oriented authoritative guidance might improve managers’ responsiveness to expressed user concern by increasing the potential consequences from users of not reissuing financial statements when misstatements have been uncovered. When managers know that users (do not) consider a specific line item in the financial statements to be important and that misstatements in that line item are required to be disclosed, I expect that managers will be more (less) reluctant to rely simply on a quantitative rule of thumb for determining the materiality of a misstatement in that line item. Accordingly, I hypothesize that the effect of expressed user concern on managerial determinations of materiality will be greater under a disclosure-oriented authoritative guidance than the current authoritative guidance.

To test my hypotheses, I conducted a 2 x 3 between-subjects experiment that manipulates expressed user concern (low, high) with authoritative guidance (current guidance, process

guidance, disclosure guidance). Using an adapted version of the case used in Chapter 2, participants were asked to assume the role of a CFO who discovers a misstatement in the financial statements that falls below the threshold of a quantitative rule of thumb but may still be considered material based upon qualitative considerations. Participants were asked how material they consider the misstatement to be and their belief on whether the financials should be restated.

The results of the experiment support the hypothesis that expressed user concern has a greater effect upon managerial determinations of materiality under a process-oriented authoritative guidance than under the current authoritative guidance. Under the current authoritative guidance, participants judged the materiality of a misstatement to be relatively high (and had a relatively high belief that the financials should be restated) even when users expressed that the financial statement line item was not important to them. Under the process-oriented authoritative guidance, however, participants judged the materiality of the misstatement to be relatively high (and had a relatively high belief that the financials should be restated) when users expressed that the financial statement line item was important to them and judged the materiality (and belief in restating) to be relatively low when users expressed that the financial statement line item was not important to them. However, the results of the experiment do not support the hypothesis that expressed user concern has a greater effect upon managerial determinations of materiality under a disclosure-oriented authoritative guidance than under the current authoritative guidance.

This dissertation contributes to our understanding of managerial judgment and decision-making in the context of materiality. Prior research on materiality has not given much attention to how materiality considerations are made by managers (Messier, Martinov-Bennie, & Eilifsen 2005). The experimental results of Chapter 2 provide evidence that managerial determinations of

materiality can be influenced both by direct knowledge of user needs and by authoritative guidance on qualitative considerations of materiality. At the same time, Chapter 2 documents a substitution effect between what a manager can learn from direct communication with users and authoritative guidance, which is consistent with the claim that authoritative guidance creates a compliance mentality in managers that diminishes other inputs into the judgment of materiality. These results indicate that the accounting profession and regulators may need to give further thought to how to improve managers' considerations of qualitative factors when making determinations of materiality. In Chapter 3, I provide evidence that a different, more process-based, authoritative guidance can help restore managerial sensitivity to expressed user concern even in the presence of inputs from authoritative bodies.

## CHAPTER 2 EXPRESSED USER CONCERN AND CURRENT GUIDANCE

### **Current Authoritative Guidance on Qualitative Materiality**

The accounting profession recognizes that “reporting information imposes costs, and it is important that those costs are justified by the benefits of reporting that information” (FASB 2010). Disclosures that are immaterial or inaccurate by immaterial amounts do not justify the time and resources needed to produce or correct those disclosures. Insofar as firms bear most of the costs of disclosure but may not always enjoy the benefits of disclosure, however, authoritative bodies have reason to be concerned with how preparers of financial information determine materiality.

The courts and the accounting profession have different but somewhat similar formulations of materiality. The U.S. Supreme Court has relied upon the definition that makes information material if there is “a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.” (Oesterle 2011). This definition has also been adopted by the PCAOB (PCAOB 2010b). The U.S. accounting profession has adopted a definition of materiality that is both narrower (insofar as it refers to whether information would change an economic decision) and broader (insofar as it refers to users generally and not just investors) than the one employed by the U.S. Supreme Court and the PCAOB. (FASB 2010).<sup>1</sup>

In practice, managers and auditors have tended to rely on quantitative rules of thumb, such as 5% of net income, to provide a general measure of materiality (Messier, Martinov-Bennie, & Eilifsen 2005; Eilifsen & Messier 2014). The use of quantitative rules of thumb is

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<sup>1</sup> On September 24, 2015, the FASB issued an exposure draft for a proposal that would identify materiality as a legal concept, suggesting a possible convergence between the professional and legal conceptualizations of materiality (FASB 2015).

widespread and long-lived. There is some academic support that rules of thumb capture the expectations of the average user (Rose, Beaver, Becker & Sorter 1970; Tuttle, Coller & Plumlee 2002; Kinney, Burgstahler & Martin 2002), although there is also evidence to the contrary (Firth 1979; Cho, Hagerman, Nabar & Patterson 2003). Importantly, exclusive reliance on quantitative rules of thumb does not enjoy the official sanction of the accounting profession, regulatory bodies, or the judiciary (Liu & Mittelstadt 2002; Edgley 2014). In his famous “The Numbers Game” speech, Arthur Levitt, the chairman of the SEC, criticized managers for intentionally recording errors that fell below a quantitative materiality threshold in order to meet earnings targets (Levitt 1998). The SEC’s Staff Accounting Bulletin #99 states that quantitative rules of thumb are, at best, a “preliminary assumption” and that they cannot replace professional judgment about whether users’ judgments or decisions would be affected by a missing or inaccurate disclosure. SAB 99 not only reiterated that materiality should include qualitative considerations of the needs of users, but also provided a list of cases where preparers and auditors should be particularly sensitive (SEC 1999). (See Appendix A for both general guidance and the list of cases found in SAB 99.) Later guidance has echoed this concern, while the list of cases provided in the guidance has grown. For example, while the SEC’s SAB 99 has nine examples of situations where qualitative considerations might lead to lower materiality thresholds than what is provided by a quantitative rule of thumb, the PCAOB’s Auditing Standards No. 14 has 16 examples (SEC 1999; PCAOB 2010a).

Accounting research provides evidence that qualitative concerns are sometimes taken into consideration by managers and auditors (Liu & Mittelstadt 2002; Acito, Burks & Johnson 2009). It is unclear, however, what mechanisms influence managers to go beyond a reliance on quantitative rules of thumb when making judgments about materiality. In this chapter, I consider

two mechanisms: direct interactions with users and the current authoritative guidance on materiality.

### **Shaping Managerial Judgments of Materiality from Direct Interaction with Users**

In determining whether an amount is material, managers are ostensibly forming an opinion about the point of view of financial statement users, i.e., what financial statement users consider useful. To take up the point of view of another is called perspective taking, and a range of research has shown that perspective taking contributes to a better understanding of what the end users of a product or process consider useful (Grant & Berry 2011).

Knowledge is constructed in a particular social context. That is, individuals function as members of groups, so the collection of information and interpretation of information is guided by the norms of the group the individual is within (Mohrman, Gibson & Mohrman 2001). Organizational research provides evidence that organizations are prone to rely on routine processes of information gathering and interpretation in order to construct their internal collective understandings or “thought-worlds.” The point of view internal to an organization may well not align with points of view external to the organization (Dougherty 1992).

To move beyond an organization’s “thought-world” requires then the incorporation of points of view outside the organization (Dougherty 1992). Perspective taking is necessary to disrupt the familiar patterns of thought within an organization in part because those forms of knowing are so tacit. Groups assume their own viewpoints to be more universal than they actually are (Mohrman et al. 2001). Furthermore, the incorporation of views outside the organization cannot come solely from models of the end user or abstract, objective information. Such sources are either easy to ignore or can be subsumed within the internal processes that preserve the point of view prevalent within an organization. Instead, proper perspective taking requires direct contact with groups outside of the organization (Dougherty 1992).

An effective organizational mechanism for perspective taking is a forum where an organization can jointly share, clarify and interpret information with the end users of the organization's output. By going through a collaborative process that involves "dialogue" and "bidirectional influence," an organization can provide output that end users consider more useful. Direct contact with end users not only provides organizations with new, valuable information, but also with information that is more memorable (Mohrman et al. 2011)

Accounting research indicates that there are a number of settings in which managers and users have the opportunity for interaction. A public setting for this interaction is the conference call, where managers take questions from analysts (Mayew 2008). There are other formal, less public, settings as well, such as conference presentations (Bushee, Jung & Miller 2011, 2013) and analyst/investor days (Kirk & Markov 2016) where managers make presentations and have meetings with analysts and institutional investors. In addition, managers meet privately with analysts and investors outside of organized events (Soltes 2014; Brown, Call, Clement & Sharp 2015).

A common theme in the just-mentioned research is the importance of face-to-face time with managers. While Regulation FD prohibits the release of material, non-public information, both analysts and investors find it valuable to have an opportunity to ask their own questions. In a face-to-face meeting, analysts and investors can ask questions without tipping off their views to other analysts and investors (Brown, Call, Clement & Sharp 2015). They can also use these meetings to make inferences from managerial tone and body language (Bushee, Jung & Miller 2013; Brown, Call, Clement & Sharp 2015). Managers benefit from face-to-face meetings by maintaining some influence over the interpretation of their firm's disclosures and by encouraging analyst coverage and institutional investment. These meetings are so important to managers that

CEOs and CFOs spend a non-trivial amount of their time arranging and participating in them (Solomon & Soltes 2015).

In short, there is evidence that it is important for managers to understand the perspectives of key users of financial information. When investor relation professionals begin an investor relations program at a firm, one of the first steps is to develop a profile of the type of investor who will find that firm attractive. A subsequent step is to have managers meet with investors who fit that profile in order to begin to develop a network. Surveys of investor relations professionals also indicate that a primary goal is to develop credible communications rather than short-term manipulations of stock price. The relationship between managers and key analysts/investors is thus typically long-term and personal (Bushee & Miller 2012).

Given the above, it would appear that, in the absence of authoritative guidance, managers in direct communication with users will judge errors to be more material for items of financial disclosures they believe users consider important than for items of financial disclosures they believe users do not consider important. Furthermore, if managers discover a misstatement in their financial statements, they will likely assess the materiality of that misstatement to determine the proper course of action. The more material the misstatement, the more likely it would be for managers to restate the firm's financial statements. Accordingly, in the absence of authoritative guidance, managers will be more likely to reissue financial statements when misstatements are in items of financial disclosures they believe users consider important than in items of financial disclosures they believe users do not consider important.

### **Compliance Mentality**

Accounting research has generally documented that the presence and nature of authoritative guidance is highly influential on managers' financial reporting choices. (Hackenbrack and Nelson 1996; Nelson, Elliott & Tarpley 2002). Unlike guidance that is

intended to restrict the choices of management, the current authoritative guidance on materiality appears to be intended to increase the judgment of practitioners. SAB 99, for example, specifically rejects the approach of replacing one mechanical formula for determining materiality, i.e., quantitative rules of thumb, with another (SEC 1999).

Theoretically, however, there is a concern that the presence of authoritative guidance creates a myopic “compliance mentality” such that managers focus on what they perceive to be the expectations of authoritative bodies rather than using their own best judgment. A compliance mentality is often associated with managers mechanically going through a check-list of regulatory demands. The concern over compliance mentality has been expressed in many areas, including audit (Hanson 2015), healthcare (Sluyter 1998), environmental protection (Gunningham, Thornton & Kagan 2005), banking (Tarullo 2014), and occupational safety (Gunningham 1999).

In some cases, a compliance mentality may develop either when managers do not share the goals of authoritative bodies or they do not believe that the prescriptions from authoritative bodies are appropriate for those goals. In these situations, managers are responding to the power of authorities to punish infractions and will do what is minimally required to avoid punitive actions. In many cases, however, managers may share the goals of authoritative bodies and they see authoritative guidance as establishing the boundaries of what it means to be legitimate and a good citizen. In these cases, managers are trusting that authoritative bodies have accurately determined what is needed (Gunningham 1999).

Authoritative bodies are themselves concerned about managers developing a compliance mentality. For example, while there may be important minimum standards for safety in the workplace, it is impossible for authoritative safety standards to envision the potential dangers of

every workplace. Accordingly, authorities dedicated to promoting occupational safety would prefer if managers both share their goals of workplace safety while using the managers' best judgment to determine how safety can be enhanced in their particular workplace (Gunningham 1999).

Figure 2-1 provides a visual representation consistent with an interaction between expressed user concern and authoritative guidance on materiality. As stated before, in the absence of authoritative guidance, learning from users that they consider a particular disclosure to be important will lead managers to consider a misstatement in that disclosure to be more material than for a disclosure that users indicate they do not consider important. In the presence of the current authoritative guidance, however, it is expected that managers will attend to the guidance such that the influence of the information from users has a decreased effect. Since the most direct way for managers to show that they are in compliance with the current authoritative guidance is to have materiality thresholds that are lower than the quantitative rules of thumb, it is expected that managers exposed to the current authoritative guidance will determine that an error in a financial disclosure is more material even when direct evidence from users suggests otherwise.<sup>2</sup>

Audit research provides evidence of an effect of authoritative guidance that is consistent with Figure 2-1 in two ways. First, auditors are more likely to consider a proposed audit adjustment to be qualitatively material and auditors perceive managers as more likely to accept a qualitatively material audit adjustment when there is guidance. Second, the presence of guidance

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<sup>2</sup> It may seem to be socially desirable for authoritative guidance to uniformly lower a manager's materiality thresholds. Given the costs of disclosure, however, it may be sub-optimal to encourage managers to consider a disclosure (or its accuracy) to be material when other inputs from the business environment suggest otherwise.

tends to eliminate or weaken other factors that affect materiality judgments (Ng & Tan 2003, 2007; Ng 2007).

The above leads to the following hypothesis:

**H1:** The effect of expressed user concern for a financial disclosure on managerial determinations of materiality will be greater when the current authoritative guidance is absent than when it is present. When the current authoritative guidance is present, managers will determine the materiality of a misstatement in a financial disclosure to be relatively high whether users consider the disclosure to be important or not.

If managers discover a misstatement in their financial statements, they will likely assess the materiality of that misstatement to determine the proper course of action. The more material the misstatement, the more likely it would be for managers to restate the firm's financial statements. Accordingly, I posit the following hypothesis:

**H2:** The effect of expressed user concern for a financial disclosure on a manager's likelihood of reissuing financial statements (when a misstatement is discovered in that disclosure) will be greater when the current authoritative guidance is absent than when it is present. When the current authoritative guidance is present, managers will be relatively more likely to reissue financial statements whether users consider the disclosure to be important or not.

### **Method**

I test my hypotheses using an experiment that manipulates, between-subjects, user attention to a financial disclosure at two levels (High, Low) and authoritative guidance at two levels (Current Guidance, No Guidance). Participants are 146 people who self-reported as having been previously enrolled in an accredited MBA program (66%) or as currently enrolled in an accredited MBA degree (34%). Participants were obtained from Amazon's Mechanical Turk. Research indicates that Mechanical Turk workers exhibit levels of honesty and effort that are similar to student populations often used in accounting research (Farrell, Grenier & Leiby 2016). The average age of the participants is 33 and 57% are male. 62% reported that their MBA

program ranks in at least the top 20%. 73% of participants reported having between “Moderate” and “Extensive” managerial experience.

Participants completed an online survey that asked them to imagine being the CFO of Macon Railway Corporation. In this simulation, Macon Railway Corporation has recently issued financial statements but has discovered from later procedures that the compensation and benefits expense line item was misstated by \$78 million, which is below the 5% of net income rule of thumb the firm uses to determine materiality. Participants are given three years of the firm’s income statement, including what the income statement would look like if there were a revision. They are told that managerial bonuses will be lower if the compensation and benefits expense line item is reported at the corrected amount. Participants in the High (Low) expressed user concern condition were told that, based on a number of observations, analysts and investors do (do not) appear to consider the compensation and benefits expense line item to be important to their uses. Participants in the Current Guidance (No Guidance) authoritative guidance condition were (were not) presented with guidance from the SEC both warning against an over-reliance on numerical thresholds for determining materiality and indicating that situations where misstatements increase management’s compensation are situations where managers should be particularly concerned with user needs. (See Appendix B for the exact wording of the manipulations.) Participants were told that there will be an upcoming meeting with the firm’s external auditor to determine if the firm should restate its financials.

After being given the above information, participants answer two questions that serve as dependent variables for the study. First, participants, in the role of the CFO, were asked (on an 8-point scale) the extent to which they consider the misstatement in compensation and benefits

expense to be material. Next, they were asked their likelihood (on an 8-point scale) of whether they would advocate for restating the financials or not.

In the post-experimental questionnaire, participants provided answers to manipulation checks, supplemental questions, and demographic queries.

## **Results**

### **Manipulation Checks**

To test whether the expressed user concern for a financial disclosure manipulation had an effect, participants were asked: “To what extent do analysts and investors appear to pay attention to the compensation and benefits expense and/or the compensation to revenue financial ratio?” (7 point Likert scale, from 1 “Little attention” to 4 “Moderate attention” to 7 “Significant attention”). Participants in the Low user concern condition reported a mean (standard deviation) of 2.82 (1.95) while participants in the High user concern condition reported 5.02 (1.59). This difference is highly significant ( $p < .001$ ), indicating that the expressed user concern manipulation was successful.

To test whether the authoritative guidance manipulation had an effect, participants were asked: “To what extent did the simulation provide guidance from regulators (i.e., the Securities and Exchange Commission) concerning the use of rules of thumb (such as 5% of net income) for determining materiality?” (7 point Likert scale, from 1 “Little to no guidance” to 4 “Moderate guidance” to 7 “Extensive guidance”). Participants in the No Guidance condition reported a mean (standard deviation) of 3.97 (1.68) while participants in the Current Guidance condition reported a mean (standard deviation) of 4.94 (1.59). This difference is highly significant ( $p < .001$ ), indicating that the authoritative guidance manipulation was successful.

## **Tests of Hypotheses**

Tables 2-1 and 2-2 provide descriptive statistics (Panel A), an ANOVA (Panel B), and a planned contrast (Panel C). Figures 2-2 and 2-3 provide a visual representation of the descriptive statistics from Tables 2-1 and 2-2, respectively.

Hypotheses 1 and 2 posit an interaction between expressed user concern for a financial disclosure and authoritative guidance such that obtaining evidence directly from users that a financial statement item is important to them will have a substitute effect with authoritative guidance in that either factor will make managers more likely to A) to consider misstatements associated with those items to be material and B) to reissue financial statements that have misstatements in those items. Given the ordinal nature of this prediction (Figure 2-1), the best analysis is not the traditional ANOVA but a planned contrast that compares the Low User Concern/No Guidance to the other three conditions (Buckless & Ravenscroft 1990). (The planned contrast weights the Low User Concern/No Guidance condition as -3 and the other three conditions as +1.)

The planned contrast tests were performed in accordance with the three-step procedure recommended by Guggenmos, Piercey & Agoglia (2016). First, a visual inspection is made of the actual cell means against the pattern of the contrast weights to see if there are any troubling discrepancies. Second, tests of significance are performed both for the planned contrast and the residual between-cells variance. If the contrast weights are a good fit for the actual cell means, the planned contrast should be statistically significant and the residual between-cells variance should be statistically non-significant. Third, the effect size of the planned contrast is measured to provide assurance that the contrast weights explain most of the variance between cells.

Hypothesis 1 is supported by the data. First, a visual comparison of the actual cell means (Figure 2-2) to the figure implied by the contrast weights (Figure 2-1) shows a reasonable

similarity. Second, the planned contrast in Table 2-1, Panel C, shows a significant interaction ( $p = .018$ ) while the residual between-cells variance is non-significant ( $p = .420$ ). Finally, the  $r$ -squared of the planned contrast is .928, indicating that the planned contrast explains 92.8% of the between-cells variance.

Hypothesis 2 is also supported by the data. First, a visual comparison of the actual cell means (Figure 2-3) to the figure implied by the contrast weights (Figure 2-1) shows a reasonable similarity. Second, the planned contrast in Table 2-2, Panel C, shows a significant interaction ( $p = .044$ ), while the residual between-cells variance is non-significant ( $p = .440$ ). Finally, the  $r$ -squared of the planned contrast is .920, indicating that the planned contrast explains 92.0% of the between-cells variance.

### **Discussion**

While standards of materiality differ according to jurisdiction, generally financial disclosures are considered material based upon the relevance of those disclosures to users. The U.S. courts and the PCAOB use the standard that a disclosure is material if there is “a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.” (Oesterle 2011). The U.S. accounting profession uses the standard that “information is material if omitting it or misstating it could influence decisions that users make on the basis of the financial information of a specific reporting entity” (FASB 2010).

In practice, however, both managers and auditors tend to rely mechanically on quantitative rules of thumb, such as 5% of net income (Messier, Martinov-Bennie, & Eilifsen 2005; Eilifsen & Messier 2014). Accordingly, various authoritative bodies (such as the SEC, the FASB, and the PCAOB) have issued guidance to remind practitioners that materiality decisions require professional judgment and should not be reduced to formulaic approaches (SEC 1999;

AICPA 2006; PCAOB 2010a.) In some cases, the authoritative guidance includes lists of situations where practitioners should be particularly concerned about user needs (SEC 1999; PCAOB 2010a.)

This chapter provides evidence that the current authoritative guidance on qualitative materiality may not have the effect that the profession and regulators intend. Results show that, in the absence of authoritative guidance, managers are influenced in their materiality determinations by an important input, namely, knowledge gained from direct interaction with users. In the absence of authoritative guidance, knowing that users consider a financial statement item to be important to their uses leads managers (a) to consider a misstatement in the item to be more material and (b) to be more likely to reissue financial statements that contain that misstatement than when managers know that users do not consider the financial statement item to be important to their uses.

In the presence of the current authoritative guidance, however, the effect of expressed user concern on managerial materiality determinations diminishes. Results show a substitution effect between the current authoritative guidance and expressed user concern, such that knowing that users consider a financial statement item to be important to their uses and knowing that authoritative bodies are concerned about qualitative materiality factors have a similar effect on managerial determinations of materiality. These results indicate a compliance mentality such that managers respond to the expectations of authoritative bodies to the exclusion of other inputs, even when the intention of authoritative guidance is to increase managerial sensitivity to those inputs.

In other areas, such as health care, occupational safety and banking, regulators have sought to avoid a compliance mentality among managers by introducing regulation that focuses

on decision-making processes rather than specified outcomes (Sluyter 1998; Gunningham 1999; Tarullo 2014). The results of this study suggest that authoritative bodies in accounting may also have more success in improving managerial judgments of materiality by focusing on decision-making processes. Rather than simply reminding managers to not rely on mechanical rules of thumb when determining materiality (and providing lists of situations where managers should be particularly sensitive to user needs), authoritative bodies might focus more on increasing and improving the interactions between managers and those who rely on their financial disclosures. In Chapter 3, I will look at some alternative forms of authoritative guidance, including a process-oriented form of guidance, to see if there are forms of guidance that can mitigate the effects of managers' compliance mentality.

Table 2-1. Descriptive statistics & tests on Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (None, Current) on Materiality of a Financial Statement Misstatement

| Panel A: Materiality of financial statement misstatement (scale 1 to 8) |                          |                          |                           |         |         |
|-------------------------------------------------------------------------|--------------------------|--------------------------|---------------------------|---------|---------|
|                                                                         | Guidance                 | No guidance              | Total                     |         |         |
| High user concern                                                       | 5.03<br>(2.33)<br>n = 30 | 4.66<br>(2.41)<br>n = 38 | 4.82<br>(2.36)<br>n = 68  |         |         |
| Low user concern                                                        | 4.76<br>(2.31)<br>n = 41 | 3.92<br>(1.79)<br>n = 37 | 4.36<br>(2.11)<br>n = 78  |         |         |
| Total                                                                   | 4.87<br>(2.31)<br>n = 71 | 4.29<br>(2.14)<br>n = 75 | 4.58<br>(2.23)<br>n = 146 |         |         |
| Panel B: ANOVA                                                          |                          |                          |                           |         |         |
| Source                                                                  | SS                       | Df                       | MS                        | F-value | p-value |
| User Concern                                                            | 9.30                     | 1                        | 9.30                      | 1.89    | .172    |
| Guidance                                                                | 13.24                    | 1                        | 13.24                     | 2.69    | .103    |
| User Concern*Guidance                                                   | 1.92                     | 1                        | 1.92                      | .389    | .534    |
| Error                                                                   | 699.84                   | 142                      | 4.93                      |         |         |
| Total                                                                   | 724.29                   | 145                      |                           |         |         |
| Panel C: Planned Contrast                                               |                          |                          |                           |         |         |
| Source                                                                  | SS                       | Df                       | MS                        | F-value | p-value |
| Contrast (+1,+1,+1,-3)                                                  | 22.12                    | 1                        | 22.12                     | 4.49    | .018    |
| Residual between-cells variance                                         | 1.72                     | 2                        | .86                       | .18     | .420    |
| Error                                                                   | 699.84                   | 142                      | 4.93                      |         |         |
| Total                                                                   | 723.67                   | 145                      |                           |         |         |

Table 2-2. Descriptive statistics & tests on Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (None, Current) on Likelihood of Restating Financials

| Panel A: Materiality of financial statement misstatement (scale 1 to 8) |                          |                          |                           |
|-------------------------------------------------------------------------|--------------------------|--------------------------|---------------------------|
|                                                                         | Guidance                 | No guidance              | Total                     |
| High user concern                                                       | 4.93<br>(2.36)<br>n = 30 | 4.79<br>(2.50)<br>n = 38 | 4.85<br>(2.42)<br>n = 68  |
| Low user concern                                                        | 4.59<br>(2.40)<br>n = 41 | 3.97<br>(2.47)<br>n = 37 | 4.29<br>(2.43)<br>n = 78  |
| Total                                                                   | 4.73<br>(2.37)<br>n = 71 | 4.39<br>(2.50)<br>n = 75 | 4.55<br>(2.44)<br>n = 146 |

| Panel B: ANOVA          |        |     |       |         |         |
|-------------------------|--------|-----|-------|---------|---------|
| Source                  | SS     | Df  | MS    | F-value | p-value |
| User Attention          | 12.21  | 1   | 12.21 | 2.06    | .153    |
| Guidance                | 5.15   | 1   | 5.15  | .87     | .353    |
| User Attention*Guidance | 1.98   | 1   | 1.98  | .334    | .564    |
| Error                   | 841.11 | 142 | 5.92  |         |         |
| Total                   | 860.44 | 145 |       |         |         |

| Panel C: Planned Contrast       |        |     |       |         |         |
|---------------------------------|--------|-----|-------|---------|---------|
| Source                          | SS     | Df  | MS    | F-value | p-value |
| Contrast (+1,+1,+1,-3)          | 17.44  | 1   | 17.44 | 2.95    | .044    |
| Residual between-cells variance | 1.51   | 2   | .76   | .13     | .440    |
| Error                           | 841.11 | 142 | 5.92  |         |         |
| Total                           | 860.06 | 145 |       |         |         |

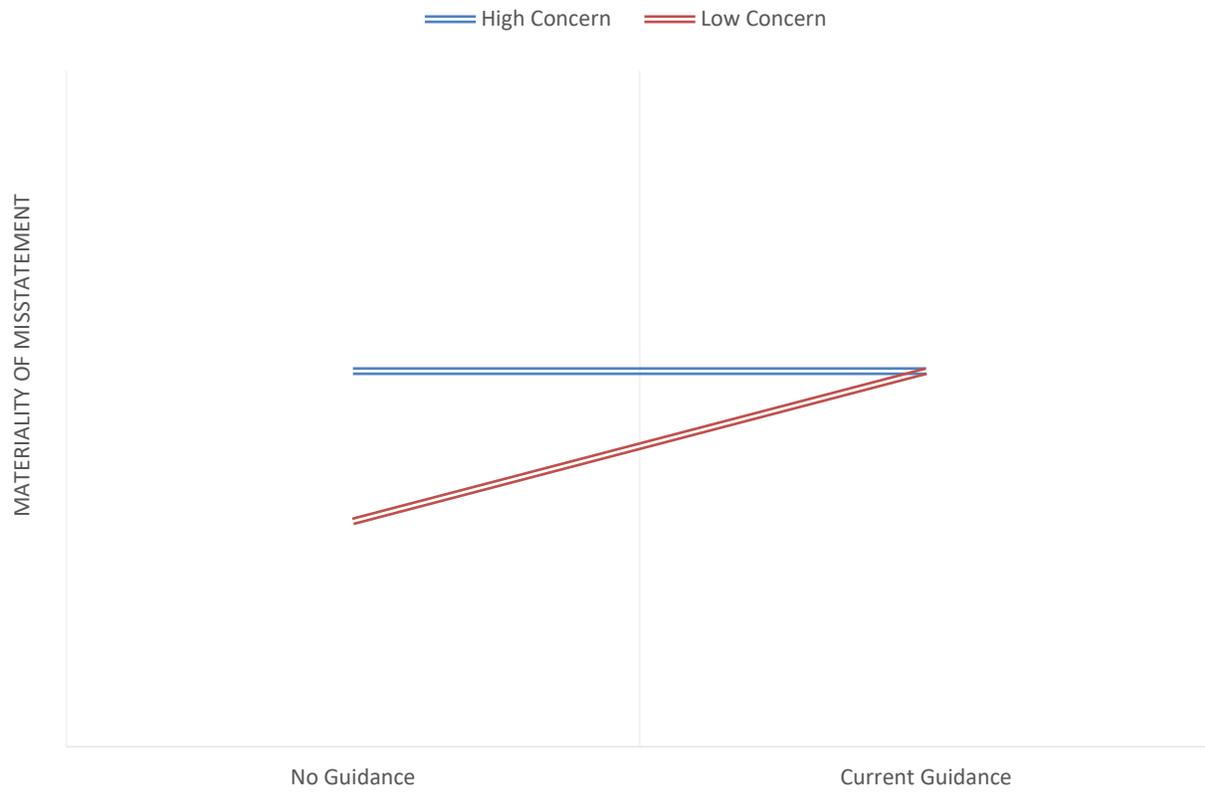


Figure 2-1. Hypothesized effect of Authoritative Guidance (None, Current)

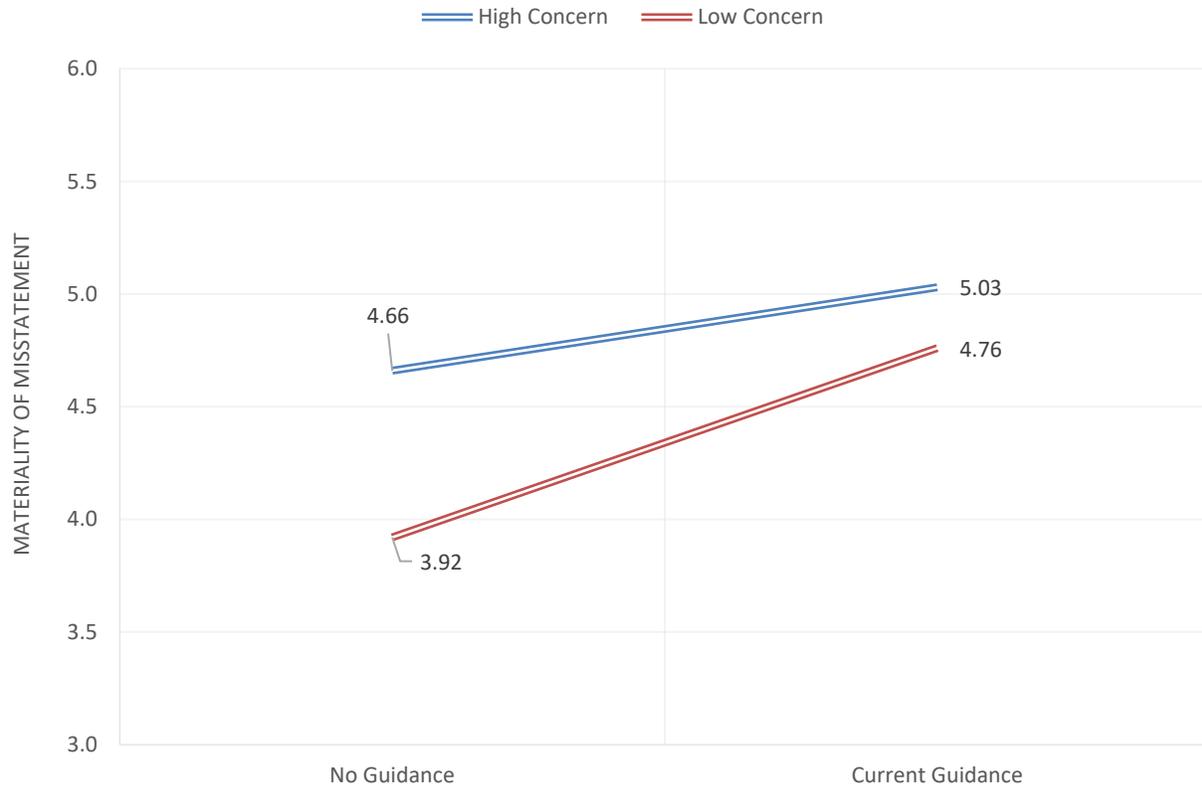


Figure 2-2. Experimental results: Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (None, Current) on Materiality of a Financial Statement Misstatement

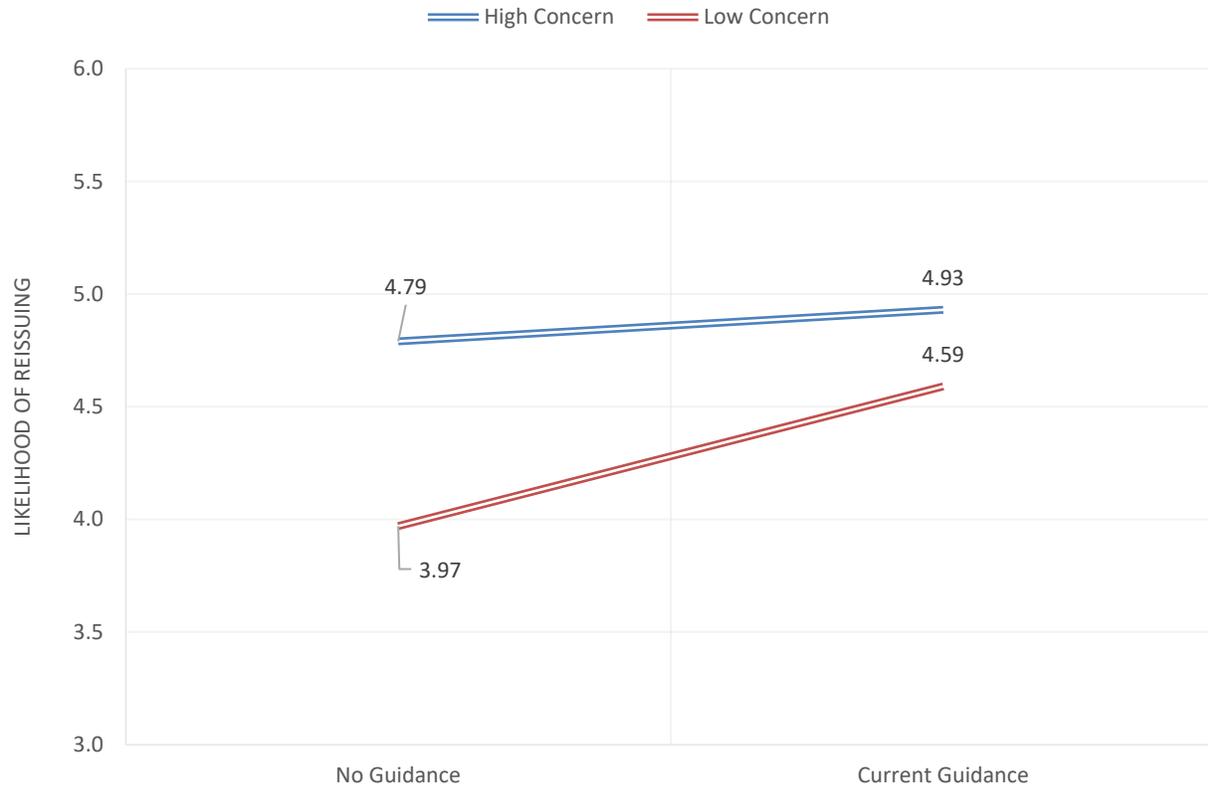


Figure 2-3. Experimental results: Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (None, Current) on Likelihood of Restating Financials

## CHAPTER 3 EXPRESSED USER CONCERN AND ALTERNATIVE GUIDANCE

The results of the experiment in Chapter 2 provide evidence that current authoritative guidance on materiality creates a compliance mentality for managers in their determinations of materiality. In the absence of authoritative guidance, the expressed concerns of users have a greater impact on managerial determinations of materiality than in the presence of current authoritative guidance. In other words, when presented with the current authoritative guidance on materiality, managers appear to be less sensitive to relevant information that is not addressed by the current authoritative guidance. Alternative approaches to guidance, however, may be able to mitigate the effects of managers' compliance mentality.

### **Alternative Forms of Authoritative Guidance**

#### **Process-oriented Authoritative Guidance**

Managers may exhibit a compliance mentality, but whether this is a problem depends upon the nature of the regulatory approach and regulatory objectives. Theory on law and regulation indicates that different regulatory logics are appropriate for different kinds of social problems (Baldwin & Black 2008). For example, the traditional command and control regulatory logic, where authorities provide specific performance standards for others to follow, works well when performance standards can be easily specified and monitored (Gunningham & Holley 2016). In circumstances such as this, there is not an important difference between "good compliance" and "mere compliance," because successful compliance involves meeting a bright-line standard. Here there is not much harm to managers' having a compliance mentality. For example, a regulation that puts limits on the amount of pollutants a firm can release into the air might not require much managerial judgment. In such a case, outcomes would be similar whether

the manager followed the regulation begrudgingly, or blindly, or with genuine interest in protecting the environment.

There are social problems, however, that cannot be easily addressed by well-specified and well-monitored performance standards. Work-place safety, for example, can depend upon the particular features of the work-place of the firm, making it hard for regulators to address with broad standards. In circumstances such as this, a reflexive regulatory logic appears more appropriate than a command and control regulatory logic (Teubner 1983; Stewart 2003; Gunningham 2015). When authorities follow a reflexive regulatory logic, they act as facilitators to promote collaborative problem solving among relevant stakeholders. Rather than setting standards for performance, authorities set standards for the processes that need to be followed to facilitate responsible decision-making (Freeman 1997; Gaines & Kimber 2001). When authorities operate using a reflexive regulatory logic, a compliance mentality from managers can be a problem because here authorities depend upon (a) managers making independent judgments and (b) managers taking ownership of the decision-making process (McCrudden 2007).

Freeman (1997) provides a number of examples of reflexive regulation, including the Environmental Protection Agency's Project XL, which substituted a single, comprehensive permit in place of specific permits for different areas of operation. The EPA essentially was providing permits for general firm processes that had been determined by collaborative agreements between the firm, the EPA, and relevant stakeholders. The inclusion of relevant stakeholders is important, because stakeholders often have concerns not anticipated by either management or regulators (Gunningham, Kagan & Thornton 2004).

For guidance on materiality, a reflexive regulatory logic may be more appropriate than other regulatory approaches, including the traditional command and control logic. The FASB's

Concepts Statement No. 8 recognizes materiality as an entity-specific concept, suggesting that the appropriate materiality decisions for one firm may be very different than for another (FASB 2010). More generally, determining the materiality of financial disclosures is an *ill-structured problem* (Krogstad et al 1984; Abdolmohammadi & Wright 1987; Carpenter & Dirsmith 1992). Ill-structured problems have the following characteristics: (a) there is no definitive formulation of the problem and (b) there is no definitive solution to the problem (Rittel & Weber 1973; Simon 1973). There is a social dimension to ill-structured problems in that often different stakeholders will have different formulations of the problem and different standards for what would be an acceptable solution. Accordingly, ill-structured problem solving is inherently argumentative, as the different viewpoints and concerns of different stakeholders are taken into account and weighed against one another (Rittel & Weber 1973).

A reflexive regulatory logic is an appropriate response to ill-structured problems because, under this logic, regulators do not present themselves as authorities on what should be done. Rather, regulators seek to guarantee that the relevant stakeholders' viewpoints and concerns are represented in the decision-making process. Stakeholders' interaction promotes a mutual learning that ideally leads to solutions, which perhaps no one envisioned prior to the mutual learning, that provide some level of satisfaction to all (Rittel & Weber 1973; Jentoft & Chuenpagdee 2009). While well-structured problems may lead problem-solvers to attempt "optimal" solutions, ill-structured problems typically lead to "satisficing" solutions where the most that might be feasible is that every stakeholder finds the solution to be acceptable (Carpenter & Dirsmith 1992). Regulators operating under a reflexive regulatory logic create the structure for such acceptable solutions to emerge.

If materiality is an ill-structured problem, one approach available to authorities is to design processes to improve ill-structured problem solving in managers. Researchers have identified a number of moments that are common to the solving of ill-structured problems: A) problem conceptualization; B) enumeration of the competing concerns involved in the problem; C) generation of possible solutions; D) defending the proposed solution against alternative solutions; and E) monitoring the problem-solving process to identify limitations of knowledge (Jonassen 1997).

Ill-structured problems pose problem solvers with a task that is demanding along both cognitive and social dimensions. Accordingly, it is common for problem solvers to inappropriately reduce ill-structured problems to well-structured problems that can be more readily solved and justified (Duhaime & Schwenk 1985). Both quantitative rules of thumb and a compliance mentality can be understood in this way. An effective process to improve ill-structured problem solving would help to reduce this reliance on heuristics (Simonson & Staw 1992).

Empirical educational research has shown that prompts (“scaffolding”) can be provided to assist problem solvers with ill-structured problems (Cho & Jonassen 2002; Ge & Land 2003; Chen & Bradshaw 2007). These prompts are generally organized according to the problem-solving steps mentioned above and include a variety of questions designed to promote thoughtfulness in each step (Jonassen 1997). For example, in a systems design task, Ge and Land (2003) prompted problem conceptualization with questions such as “What are the parts of the problem?” and “What information do you expect to be needed by the users?”, while the consideration of possible solutions was prompted by questions such as “What are [the alternative

solutions]?” and “What argument can I make or what evidence do I have to convince the manager that my solution is the most viable?”

A reflexive authoritative guidance that provides “scaffolding” when managers make materiality decisions would likely help overcome the compliance mentality exhibited in Chapter 2. By having a process that stimulates ill-structured problem solving, managers will be more likely to attend to a wider range of inputs, including those that are not explicitly provided by authorities. That is, the nature of ill-structured problem solving is to encourage the consideration of various concerns, including presumably the expressed concerns of users.

Furthermore, a reflexive authoritative guidance that emphasizes the process of materiality decision-making rather than the outcome would likely help overcome the effects of a compliance mentality as well. Research on process accountability shows that focusing on the decision-making process (rather than the decision outcomes) encourages decision-makers to include more information in their decision-making (Simonson & Staw 1992; Siegel-Jacobs & Yates 1996; Brtek & Motowidlo 2002; Scholten, van Knippenberg, Nijstad & De Dreu 2007; Cornell, Eining & Hu 2011). Decision-makers who are empowered to arrive at independent judgments that can be reasonably justified are less likely to become fixated on what outcomes those in authority deem to be “right” (Patil, Vieider & Tetlock 2016).

**The above leads to the following hypothesis:**

**H1:** The effect of expressed user concern for a financial disclosure on managerial determinations of materiality will be greater under a reflexive authoritative guidance that governs the process of ill-structured decision-making than under the current authoritative guidance. Under the current authoritative guidance, managers will determine the materiality of a misstatement in a financial disclosure to be relatively high whether users appear to consider the financial disclosure important or not.

If managers discover a misstatement in their financial statements, they will likely assess the materiality of that misstatement to determine the proper course of action. The more material the misstatement, the more likely it would be for managers to restate the firm's financial statements. Accordingly, I posit the following hypothesis:

**H2:** The effect of expressed user concern for a financial disclosure on a manager's belief that financial statements should be reissued (when a misstatement is discovered in that disclosure) will be greater under a reflexive authoritative guidance that governs the process of ill-structured decision-making than under the current authoritative guidance. Under the current authoritative guidance, managers will be relatively more likely to believe financial statements should be reissued whether users appear to consider the financial disclosure important or not.

### **Disclosure-oriented Authoritative Guidance**

A common regulatory approach is to require firms to make public disclosures about their products/services or their production/service processes (Weil et al. 2006). Examples of disclosure requirements include "nutritional labeling, toxic pollution reporting, auto safety and fuel economy ratings..." (Fung et al. 2007). A disclosure-oriented approach is particularly common in securities regulation. Rather than requiring or prohibiting certain activities of market participants, securities regulation tends to allow activities subject to the disclosure of those activities (Easterbrook & Fischel 1984). The 1933 and 1934 Securities and Exchange Acts, for example, seek to protect investors primarily by having extensive disclosure requirements around initial public offerings and less extensive disclosure requirements going forward (Mahoney 1995; Fung et al. 2007).

There are a number of goals that regulators might pursue when requiring corporate disclosures. One commonly cited rationale for mandatory corporate disclosures is informational efficiency. From this perspective, there is an undersupply of information that might be useful to investors and other stakeholders. While disclosure theory posits that managers will always

disclose information under certain idealized circumstances (Grossman 1981), there are other circumstances when managers have both the incentive and opportunity to withhold information. Mandatory disclosures therefore are considered necessary to address the undersupply of information in these circumstances (Healy & Palepu 2001). Another rationale for mandatory corporate disclosures is to address agency problems or other situations where managerial behavior does not adequately promote the public good. From the idea that transparency is the greatest “disinfectant,” regulators seek to influence behavior indirectly by increasing the costs of that behavior (Mahoney 1995; Fung et al. 2007; Ripken 2009). Regulators often prefer increased transparency as a middle ground between substantive regulation and doing nothing at all. As with reflexive authoritative guidance, a disclosure-oriented authoritative guidance that aims to increase transparency is particularly relevant when regulators cannot easily determine what is the optimal behavior for a given context (Fung et al. 2007).

Research indicates that disclosures can influence managerial decision-making. Accounting research provides evidence that mandatory disclosures can affect the level and quality of voluntary disclosures (Dye 1985; Gigler & Hemmer 2001; Einhorn 2005; Ball et al 2012). More generally, there is evidence that laws and regulations promoting transparency can decrease agency costs (Mahoney 1995; Healy & Palepu 2001) and managerial behaviors deemed undesirable from the perspective of a larger social welfare (Weil et al. 2006; Chatterji & Toffel 2010). Transparency affects managerial behavior either by the decisions made by stakeholders (when they learn of managerial behaviors) or by managers anticipating the likely decisions that stakeholders will make (Weil et al. 2006).

However, there may also be important limits to what disclosure can accomplish. The benefits of disclosure assume that stakeholders are rational actors, but there is a great deal of

behavioral evidence that points to limitations in stakeholder rationality, limitations that managers might be able to exploit (Ripken 2009). Furthermore, experimental research on conflict of interests disclosures indicates that these disclosures may create a sense of “moral license” that make it easier to rationalize future bad behavior (Cain et al. 2005; Sachdeva et al. 2009).

To increase managerial responsiveness to expressed user concern, managers might be required to publicly disclose all non-trivial misstatements that have been discovered that would affect previously issued financial statements. This disclosure would be separate from any decision about whether to reissue the financial statements affected by the discovered misstatement. If such a disclosure were required, it is expected that managers would be especially mindful of how investors would respond if misstatements were disclosed but the relevant financial statements were not reissued. Being mindful of anticipated investor reaction would likely lead managers to deem a misstatement to be more (less) material when users have expressed that the disclosure containing the misstatement is (is not) important to them.

Accordingly,

**H3:** The effect of expressed user concern for a financial disclosure on managerial determinations of materiality will be greater under a disclosure-oriented authoritative guidance than under the current authoritative guidance. Under the current authoritative guidance, managers will determine the materiality of a misstatement in a financial disclosure to be relatively high whether users appear to consider the financial disclosure important or not.

Managers are likely to anticipate a more negative (less negative) investor reaction to disclosing a misstatement and not reissuing when users have expressed that the disclosure containing the misstatement is (is not) important to them. Accordingly,

**H4:** The effect of expressed user concern for a financial disclosure on a manager’s belief that financial statements should be reissued (when a misstatement is discovered in that disclosure) will be greater under a disclosure-oriented authoritative guidance than under the current authoritative guidance. Under the current authoritative guidance, managers will be relatively more likely to believe

financial statements should be reissued whether users appear to consider the financial disclosure important or not.

### **Method**

I test my hypotheses using an experiment that manipulates, between-subjects, expressed user concern for a financial statement line item at two levels (*High, Low*) and authoritative guidance at three levels (*Current Guidance, Process Guidance, Disclosure Guidance*).

Participants are 243 people who self-reported as having been previously enrolled in an accredited MBA program (63%) or as currently enrolled in an accredited MBA degree (37%). Participants were obtained from Amazon's Mechanical Turk. Research indicates that Mechanical Turk workers exhibit levels of honesty and effort that are similar to student populations often used in accounting research (Farrell, Grenier & Leiby 2016). The average age of the participants is 35 and 62% are male. 61% reported that their MBA program ranks in at least the top 20%. 65% of participants reported having between "Moderate" and "Extensive" managerial experience.

Participants completed an online survey, very similar to the one described in Chapter 2, that asked them to imagine being the CFO of Macon Railway Corporation. In this simulation, Macon Railway Corporation has issued 2016 financial statements but has discovered from later procedures (in 2017) that the compensation and benefits expense line item was misstated by \$78 million, which is below the 5% of net income rule of thumb the firm uses to determine materiality. Participants are given three years of the firm's income statement, including what the income statement would look like if there were a revision. They are told that managerial bonuses will be lower if the compensation and benefits expense line item is reported at the corrected amount. Participants in the High (Low) expressed user concern condition were told that, based on a number of different observations, analysts and investors do (do not) appear to consider the compensation and benefits expense line item to be important. Participants in the Current

Guidance authoritative guidance condition were presented with guidance from the SEC both warning against an over-reliance on numerical thresholds for determining materiality and indicating that situations where misstatements increase management's compensation are situations where managers should be particularly concerned with user needs. Participants in the Process Guidance condition were also given the information in the Current Guidance condition. In addition, participants in the Process Guidance condition were told that the SEC requires documentation about the decision-making process whenever misstatements have been found in previously issued financial statements. They were then asked to answer questions related to problem characterization, reasons for and against restating, and a justification of whatever decision they reached. Participants in the Disclosure Guidance condition were also given the information in the Current Guidance condition. In addition, participants in the Disclosure Guidance condition were told that the SEC requires disclosure whenever misstatements are found in previously issued financial statements whether the firm decides to reissue or not. Participants were then asked to choose between two prepared disclosures. Each of the prepared disclosures stated which financial statements were affected, the line item that contained the misstatement, and the amount of the misstatement. The disclosures differed in terms of whether the firm considered the misstatement to be material and whether the firm would be reissuing financial statements. (See Appendix B for the exact wording of the manipulations.)

After being given the above information, participants answered two questions that serve as dependent variables for the study. First, participants, in the role of the CFO, were asked (on an 8-point scale) the extent to which they consider the misstatement in compensation and benefits expense to be material. Next, they were asked their belief (on an 8-point scale) of whether the financial statements should be restated (and how strongly they hold that belief).

In the post-experimental questionnaire, participants provided answers to manipulation checks, supplemental questions, and demographic queries.

## **Results**

### **Manipulation Checks**

To test whether the expressed user concern for a financial disclosure manipulation had an effect, participants were asked: “To what extent do analysts and investors appear to consider the compensation and benefits expense and/or the compensation to revenue financial ratio to be important?” (7 point Likert scale, from 1 “Little importance” to 4 “Moderate importance” to 7 “Significant importance”). Participants in the Low user concern condition reported a mean (standard deviation) of 3.01 (1.83) while participants in the High user concern condition reported 5.61 (1.34). This difference is highly significant ( $p < .001$ ), indicating that the user concern manipulation was successful.

To test whether the Process Guidance manipulation had an effect, participants were asked: “On the scale provided, indicate whether the Securities and Exchange Commission (SEC) in this simulation is primarily concerned with A) the firm’s decision-making process on materiality or B) whether the firm makes (what the SEC would consider) the right decision on materiality judgments.” (7 point Likert scale, from 1 “Decision-making process” to 7 “Making the right decision”). Participants in the Process Guidance condition reported a mean (standard deviation) of 4.03 (2.04) while participants in the other conditions reported a mean (standard deviation) of 5.03 (1.55). This difference is highly significant ( $p < .001$ ), indicating that the authoritative guidance manipulation was successful at developing a perception of what authoritative bodies are concerned with.

To test whether the Disclosure Guidance manipulation had an effect, participants were asked: “In the simulation, to what extent did the SEC require the firm to publicly disclose the

\$78M error in compensation & benefits expense, even if the firm chooses not to reissue the 2016 financial statements?” (7 point Likert scale, from 1 “No requirement” to 4 “Some requirement” to 7 “Extensive requirement”). Participants in the Disclosure Guidance condition reported a mean (standard deviation) of 4.21 (1.92) while participants in the other conditions reported 3.41 (1.81). This difference is highly significant ( $p = .001$ ), indicating that the disclosure guidance manipulation was successful.

### **Tests of Hypotheses**

Tables 3-1 and 3-2 provides descriptive statistics (Panel A) and an ANOVA (Panel B) for the full 2 x 3 with User Concern at two levels (Low, High) and Guidance at three levels (Current, Disclosure, Process). Figures 3-2 and 3-3 provide a visual representation of the descriptive statistics from Tables 3-1 and 3-2, respectively. An initial inspection of figures 3-2 and 3-3 suggests that, in comparison to current guidance, disclosure guidance did not succeed in making managers significantly more responsive to expressed user concern but that process guidance did. To verify this observation, further analysis will deconstruct the 2 x 3 into two 2 x 2 analyses with Current Guidance compared first to Process Guidance and second to Disclosure Guidance.

To examine the effects of process guidance, Tables 3-3 and 3-4 provide descriptive statistics (Panel A), an ANOVA (Panel B), and a planned contrast (Panel C) for the 2 x 2 with User Concern at two levels (Low, High) and Guidance at two levels (Current, Process). Figures 3-4 and 3-5 provide a visual representation of the descriptive statistics from Tables 3-3 and 3-4, respectively.

Hypotheses 1 and 2 posit an interaction between user concern for a financial disclosure and the nature of the authoritative guidance on qualitative materiality. Under process guidance (current guidance), managers will give greater (smaller) weight to the expressed concerns of users, such that differences in user concern will lead to greater (smaller) differences in a

manager's assessment of the materiality of a financial statement misstatement and a manager's belief that financial statements should be reissued.

Given the ordinal nature of the predictions (see Figure 3-1), the best analysis is not the traditional ANOVA but a planned contrast that compares the Low User Concern/Process Guidance to the other three conditions (Buckless & Ravenscroft 1990). (The planned contrast weights the Low User Concern/Process Guidance condition as -3 and the other three conditions as +1.)

The planned contrast tests were performed in accordance with the three-step procedure recommended by Guggenmos, Piercey & Agoglia (2016). First, a visual inspection is made of the actual cell means against the pattern of the contrast weights to see if there are any troubling discrepancies. Second, tests of significance are performed both for the planned contrast and the residual between-cells variance. If the contrast weights are a good fit for the actual cell means, the planned contrast should be statistically significant and the residual between-cells variance should be statistically non-significant. Third, the effect size of the planned contrast is measured to provide assurance that the contrast weights explain most of the variance between cells.

Hypothesis 1 is supported by the data. First, a visual comparison of the actual cell means (Figure 3-4) to the figure implied by the contrast weights (Figure 3-1) shows a reasonable similarity. Second, the planned contrast in Table 3-3, Panel C, shows a significant interaction ( $p = .008$ ) while the residual between-cells variance is non-significant ( $p = .502$ ). Finally, the  $r$ -squared of the planned contrast is .853, indicating that the planned contrast explains 85.3% of the between-cells variance.

Hypothesis 2 is also supported by the data. First, a visual comparison of the actual cell means (Figure 3-5) to the figure implied by the contrast weights (Figure 3-1) shows a reasonable

similarity. Second, the planned contrast in Table 3-4, Panel C, shows a significant interaction ( $p < .001$ ), while the residual between-cells variance is non-significant ( $p = .474$ ). Finally, the  $r$ -squared of the planned contrast is .908, indicating that the planned contrast explains 90.8% of the between-cells variance.

To examine the effects of disclosure guidance, Tables 3-5 and 3-6 provide descriptive statistics (Panel A), an ANOVA (Panel B), and a planned contrast (Panel C) for the 2 x 2 with User Concern at two levels (Low, High) and Guidance at two levels (Current, Disclosure). Figures 3-6 and 3-7 provide a visual representation of the descriptive statistics from Tables 3-5 and 3-6, respectively.

Hypotheses 3 and 4 posit an interaction along a similar logic to the interaction predicted in hypotheses 1 and 2. Again, given the ordinal nature of the predictions (see Figure 1), the best analysis is not the traditional ANOVA but a planned contrast that compares the Low User Concern/Disclosure Guidance to the other three conditions (Buckless & Ravenscroft 1990). (The planned contrast weights the Low User Concern/Disclosure Guidance condition as -3 and the other three conditions as +1.)

Hypothesis 3 is not supported by the data. First, a visual comparison of the actual cell means (Figure 3-6) to the figure implied by the contrast weights (Figure 3-1) does not show a reasonable similarity. Second, the planned contrast in Table 3-5, Panel C, shows a non-significant interaction ( $p = .159$ ). Likewise, hypothesis 4 is not supported by the data. First, a visual comparison of the actual cell means (Figure 3-7) to the figure implied by the contrast weights (Figure 3-1) does not show a reasonable similarity. Second, the planned contrast in Table 3-6, Panel C, shows a non-significant interaction ( $p = .222$ ).

Table 3-1. Descriptive statistics on User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Process, Disclosure) on Materiality of a Financial Statement Misstatement

| Panel A: Materiality of financial statement misstatement (scale 1 to 8) |                          |                          |                          |                           |         |
|-------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------|
|                                                                         | Current                  | Disclosure               | Process                  | Total                     |         |
| High user concern                                                       | 5.77<br>(1.97)<br>n = 47 | 5.06<br>(2.09)<br>n = 47 | 5.88<br>(1.72)<br>n = 34 | 5.54<br>(1.97)<br>n = 128 |         |
| Low user concern                                                        | 5.36<br>(2.30)<br>n = 42 | 4.84<br>(2.19)<br>n = 38 | 4.62<br>(1.99)<br>n = 34 | 4.96<br>(2.17)<br>n = 114 |         |
| Total                                                                   | 5.57<br>(2.13)<br>n = 89 | 4.96<br>(2.12)<br>n = 85 | 5.25<br>(1.95)<br>n = 68 | 5.27<br>(2.09)<br>n = 242 |         |
| Panel B: ANOVA                                                          |                          |                          |                          |                           |         |
| Source                                                                  | SS                       | Df                       | MS                       | F-value                   | p-value |
| User Concern                                                            | 23.71                    | 1                        | 23.71                    | 5.60                      | .019    |
| Guidance                                                                | 16.00                    | 2                        | 8.00                     | 1.89                      | .154    |
| User Concern*Guidance                                                   | 11.32                    | 2                        | 5.66                     | 1.34                      | .265    |
| Error                                                                   | 999.49                   | 236                      | 4.24                     |                           |         |
| Total                                                                   | 7765                     | 241                      |                          |                           |         |

Table 3-2. Descriptive statistics on User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Process, Disclosure) on Belief that Financials Should Be Restated

| Panel A: Belief that financials should be restated (scale 1 to 8) |                          |                          |                          |                           |         |
|-------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------|
|                                                                   | Current                  | Disclosure               | Process                  | Total                     |         |
| High user concern                                                 | 6.21<br>(2.07)<br>n = 47 | 5.68<br>(2.18)<br>n = 47 | 6.00<br>(1.92)<br>n = 34 | 5.96<br>(2.07)<br>n = 128 |         |
| Low user concern                                                  | 5.69<br>(2.30)<br>n = 42 | 5.37<br>(2.24)<br>n = 38 | 4.44<br>(2.30)<br>n = 34 | 5.21<br>(2.31)<br>n = 114 |         |
| Total                                                             | 5.97<br>(2.18)<br>n = 89 | 5.54<br>(2.20)<br>n = 85 | 5.22<br>(2.25)<br>n = 68 | 5.61<br>(2.22)<br>n = 242 |         |
| Panel B: ANOVA                                                    |                          |                          |                          |                           |         |
| Source                                                            | SS                       | Df                       | MS                       | F-value                   | p-value |
| User Concern                                                      | 37.82                    | 1                        | 37.82                    | 8.02                      | .005    |
| Guidance                                                          | 21.23                    | 2                        | 10.62                    | 2.25                      | .107    |
| User Concern*Guidance                                             | 16.29                    | 2                        | 8.15                     | 1.73                      | .180    |
| Error                                                             | 1112.29                  | 236                      | 4.71                     |                           |         |
| Total                                                             | 8793                     | 241                      |                          |                           |         |

Table 3-3. Descriptive statistics on User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Process) on Materiality of a Financial Statement Misstatement

| Panel A: Materiality of financial statement misstatement (scale 1 to 8) |                          |                          |                           |
|-------------------------------------------------------------------------|--------------------------|--------------------------|---------------------------|
|                                                                         | Current                  | Process                  | Total                     |
| High user concern                                                       | 5.77<br>(1.97)<br>n = 47 | 5.88<br>(1.72)<br>n = 34 | 5.81<br>(1.86)<br>n = 81  |
| Low user concern                                                        | 5.36<br>(2.30)<br>n = 42 | 4.62<br>(1.99)<br>n = 34 | 5.03<br>(2.18)<br>n = 76  |
| Total                                                                   | 5.57<br>(2.13)<br>n = 89 | 5.25<br>(1.95)<br>n = 68 | 5.43<br>(2.05)<br>n = 157 |

| Panel B: ANOVA        |        |     |       |         |         |
|-----------------------|--------|-----|-------|---------|---------|
| Source                | SS     | Df  | MS    | F-value | p-value |
| User Concern          | 26.95  | 1   | 26.95 | 6.63    | .011    |
| Guidance              | 3.74   | 1   | 3.74  | 0.92    | .339    |
| User Concern*Guidance | 7.05   | 1   | 7.05  | 1.74    | .190    |
| Error                 | 621.63 | 153 | 4.06  |         |         |
| Total                 | 659.37 | 156 |       |         |         |

| Panel C: Planned Contrast       |        |     |       |         |         |
|---------------------------------|--------|-----|-------|---------|---------|
| Source                          | SS     | Df  | MS    | F-value | p-value |
| Contrast (+1,+1,+1,-3)          | 29.30  | 1   | 29.30 | 7.21    | .008    |
| Residual between-cells variance | 5.62   | 2   | 2.81  | 0.69    | .502    |
| Error                           | 621.63 | 153 | 4.06  |         |         |
| Total                           | 656.55 | 156 |       |         |         |

Table 3-4. Descriptive statistics on User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Process) on Belief that Financials Should Be Restated

| Panel A: Belief financials should be restated (scale 1 to 8) |                          |                          |                           |
|--------------------------------------------------------------|--------------------------|--------------------------|---------------------------|
|                                                              | Current                  | Process                  | Total                     |
| High user concern                                            | 4.93<br>(2.36)<br>n = 30 | 4.79<br>(2.50)<br>n = 38 | 4.85<br>(2.42)<br>n = 68  |
| Low user concern                                             | 4.59<br>(2.40)<br>n = 41 | 3.97<br>(2.47)<br>n = 37 | 4.29<br>(2.43)<br>n = 78  |
| Total                                                        | 4.73<br>(2.37)<br>n = 71 | 4.39<br>(2.50)<br>n = 75 | 4.55<br>(2.44)<br>n = 146 |

| Panel B: ANOVA        |        |     |       |         |         |
|-----------------------|--------|-----|-------|---------|---------|
| Source                | SS     | Df  | MS    | F-value | p-value |
| User Concern          | 41.68  | 1   | 41.68 | 8.99    | .003    |
| Guidance              | 20.57  | 1   | 20.57 | 4.44    | .037    |
| User Concern*Guidance | 10.34  | 1   | 10.34 | 2.23    | .137    |
| Error                 | 709.23 | 153 | 4.64  |         |         |
| Total                 | 781.82 | 156 |       |         |         |

| Panel C: Planned Contrast       |        |     |       |         |         |
|---------------------------------|--------|-----|-------|---------|---------|
| Source                          | SS     | Df  | MS    | F-value | p-value |
| Contrast (+1,+1,+1,-3)          | 61.83  | 1   | 61.83 | 13.33   | < .001  |
| Residual between-cells variance | 6.96   | 2   | 3.48  | 0.75    | .471    |
| Error                           | 709.23 | 153 | 4.64  |         |         |
| Total                           | 778.03 | 156 |       |         |         |

Table 3-5. Descriptive statistics on User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Disclosure) on Materiality of a Financial Statement Misstatement

| Panel A: Materiality of financial statement misstatement (scale 1 to 8) |                          |                          |                           |
|-------------------------------------------------------------------------|--------------------------|--------------------------|---------------------------|
|                                                                         | Current                  | Disclosure               | Total                     |
| High user concern                                                       | 5.77<br>(1.97)<br>n = 47 | 5.06<br>(2.09)<br>n = 47 | 5.41<br>(2.05)<br>n = 94  |
| Low user concern                                                        | 5.36<br>(2.30)<br>n = 42 | 4.84<br>(2.19)<br>n = 38 | 5.11<br>(2.25)<br>n = 80  |
| Total                                                                   | 5.57<br>(2.13)<br>n = 89 | 4.96<br>(2.12)<br>n = 85 | 5.28<br>(2.14)<br>n = 174 |

| Panel B: ANOVA        |        |     |       |         |         |
|-----------------------|--------|-----|-------|---------|---------|
| Source                | SS     | Df  | MS    | F-value | p-value |
| User Concern          | 4.29   | 1   | 4.29  | .954    | .332    |
| Guidance              | 15.99  | 1   | 15.99 | 3.52    | .062    |
| User Concern*Guidance | .378   | 1   | .378  | .083    | .773    |
| Error                 | 771.93 | 170 | 4.54  |         |         |
| Total                 | 5636   | 173 |       |         |         |

| Panel C: Planned Contrast       |        |     |      |         |         |
|---------------------------------|--------|-----|------|---------|---------|
| Source                          | SS     | Df  | MS   | F-value | p-value |
| Contrast (+1,+1,+1,-3)          | 9.10   | 1   | 9.10 | 2.00    | .159    |
| Residual between-cells variance | 11.73  | 2   | 5.87 | 1.29    | .277    |
| Error                           | 771.93 | 170 | 4.54 |         |         |
| Total                           | 792.76 | 173 |      |         |         |

Table 3-6. Descriptive statistics on User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Disclosure) on Belief that Financials Should Be Restated

| Panel A: Belief financials should be restated (scale 1 to 8) |                          |                          |                           |
|--------------------------------------------------------------|--------------------------|--------------------------|---------------------------|
|                                                              | Current                  | Disclosure               | Total                     |
| High user concern                                            | 4.93<br>(2.36)<br>n = 30 | 5.68<br>(2.18)<br>n = 47 | 5.95<br>(2.13)<br>n = 94  |
| Low user concern                                             | 4.59<br>(2.40)<br>n = 41 | 5.37<br>(2.24)<br>n = 38 | 5.54<br>(2.26)<br>n = 80  |
| Total                                                        | 4.73<br>(2.37)<br>n = 71 | 5.54<br>(2.20)<br>n = 85 | 5.76<br>(2.19)<br>n = 174 |

| Panel B: ANOVA        |         |     |      |         |         |
|-----------------------|---------|-----|------|---------|---------|
| Source                | SS      | Df  | MS   | F-value | p-value |
| User Concern          | 7.52    | 1   | 7.52 | 1.57    | .212    |
| Guidance              | 7.87    | 1   | 7.87 | 1.64    | .202    |
| User Concern*Guidance | .475    | 1   | .475 | .099    | .753    |
| Error                 | 815.90  | 170 | 4.80 |         |         |
| Total                 | 6602.00 | 174 |      |         |         |

| Panel C: Planned Contrast       |        |     |      |         |         |
|---------------------------------|--------|-----|------|---------|---------|
| Source                          | SS     | Df  | MS   | F-value | p-value |
| Contrast (+1,+1,+1,-3)          | 7.21   | 1   | 7.21 | 1.50    | .222    |
| Residual between-cells variance | 8.75   | 2   | 4.37 | 0.91    | .404    |
| Error                           | 815.90 | 170 | 4.80 |         |         |
| Total                           | 831.86 | 173 |      |         |         |

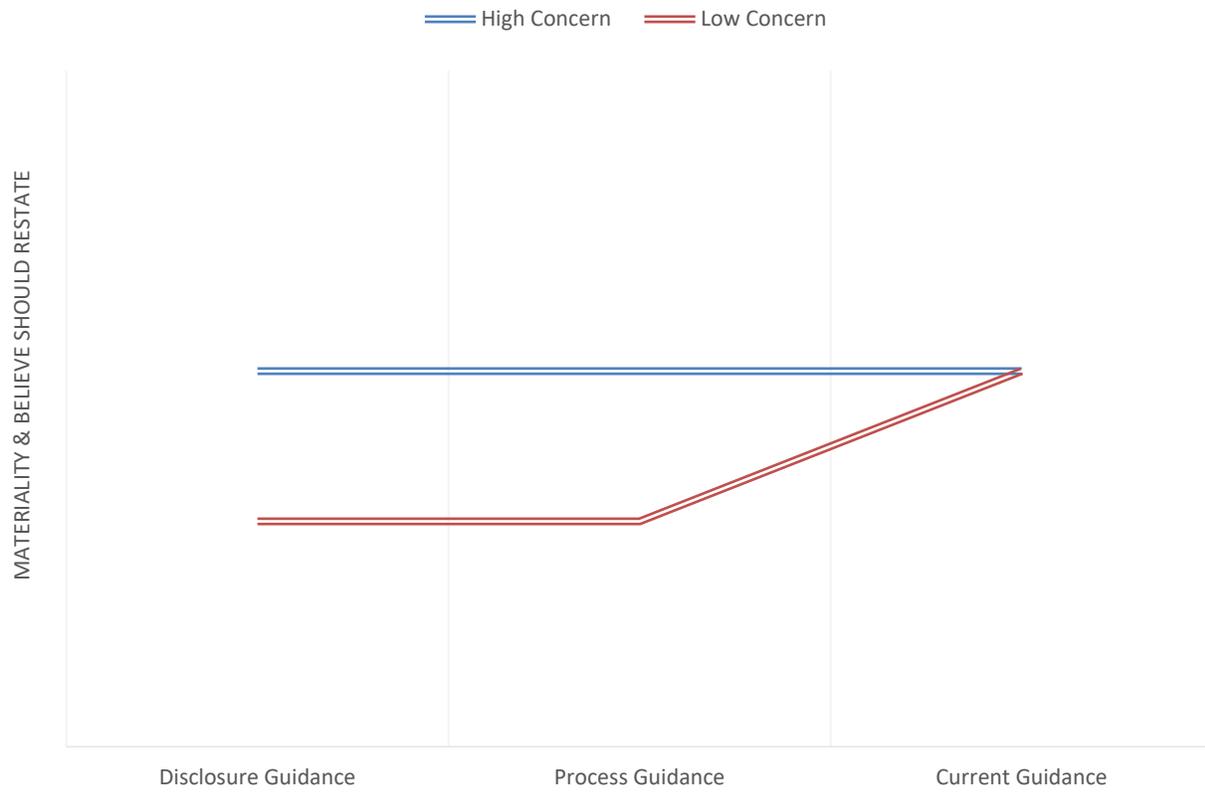


Figure 3-1. Hypothesized effect of Authoritative Guidance (Current, Process, Disclosure)

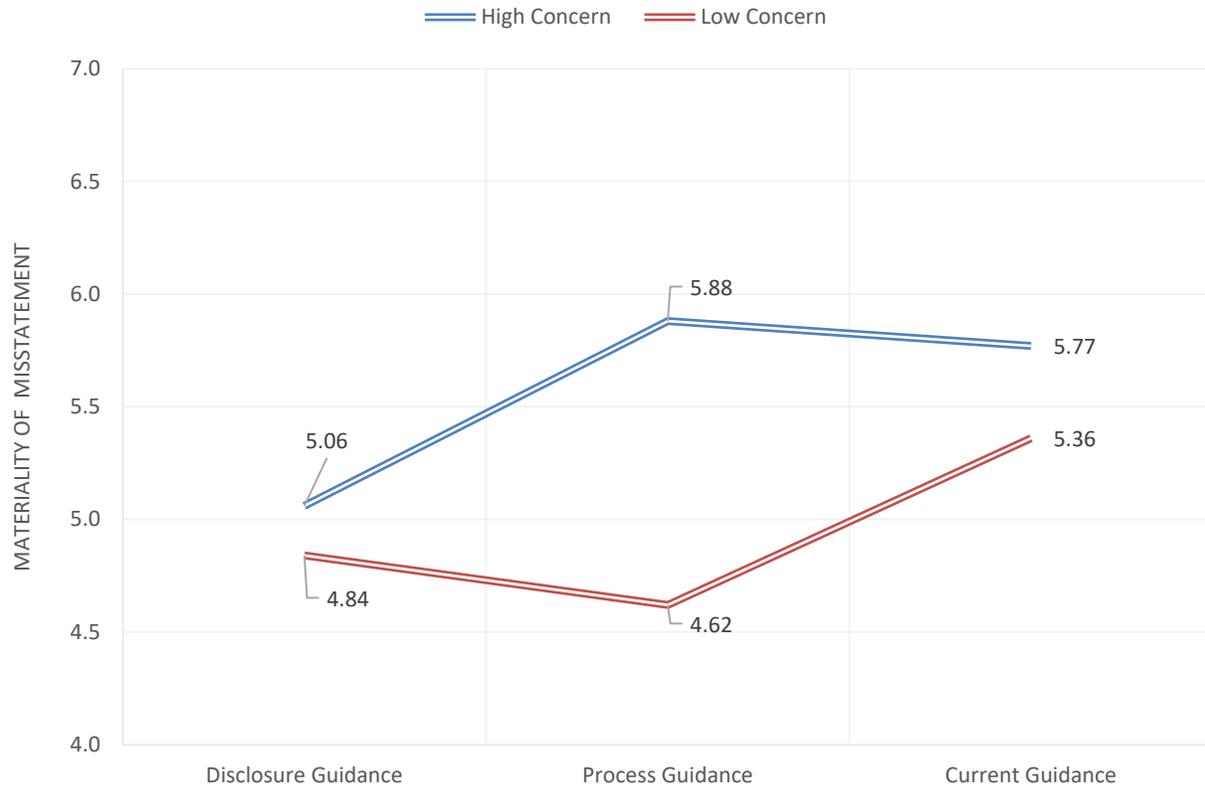


Figure 3-2. Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Process, Disclosure) on Materiality of a Financial Statement Misstatement

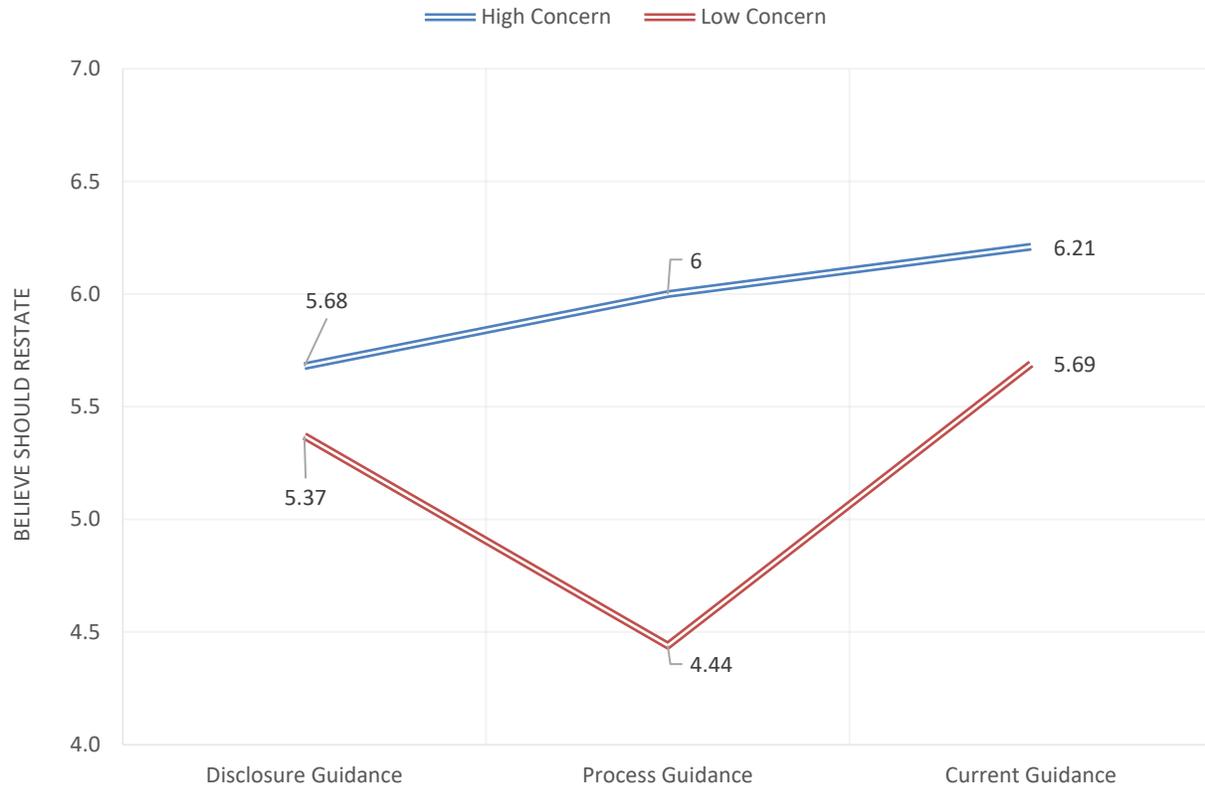


Figure 3-3. Experimental results: Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Process, Disclosure) on Belief that Financials Should be Restated

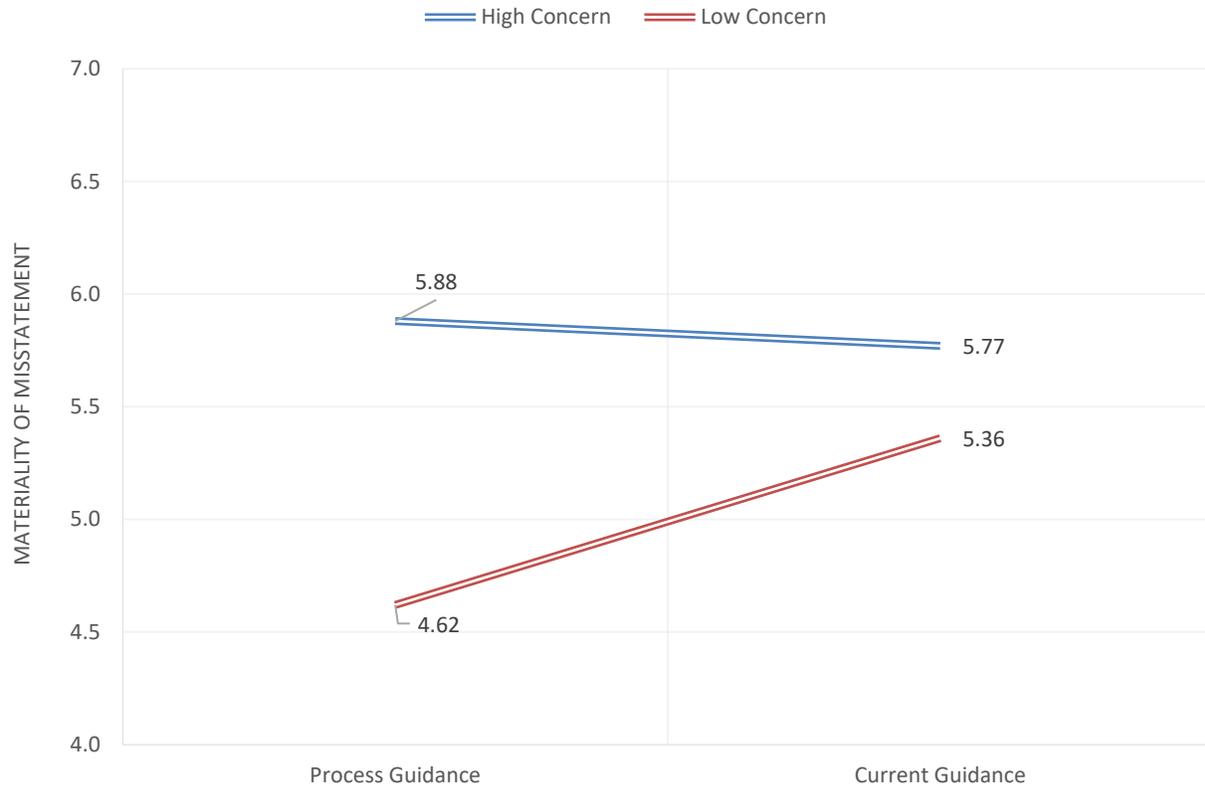


Figure 3-4. Experimental results: Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Process) on Materiality of a Financial Statement Misstatement

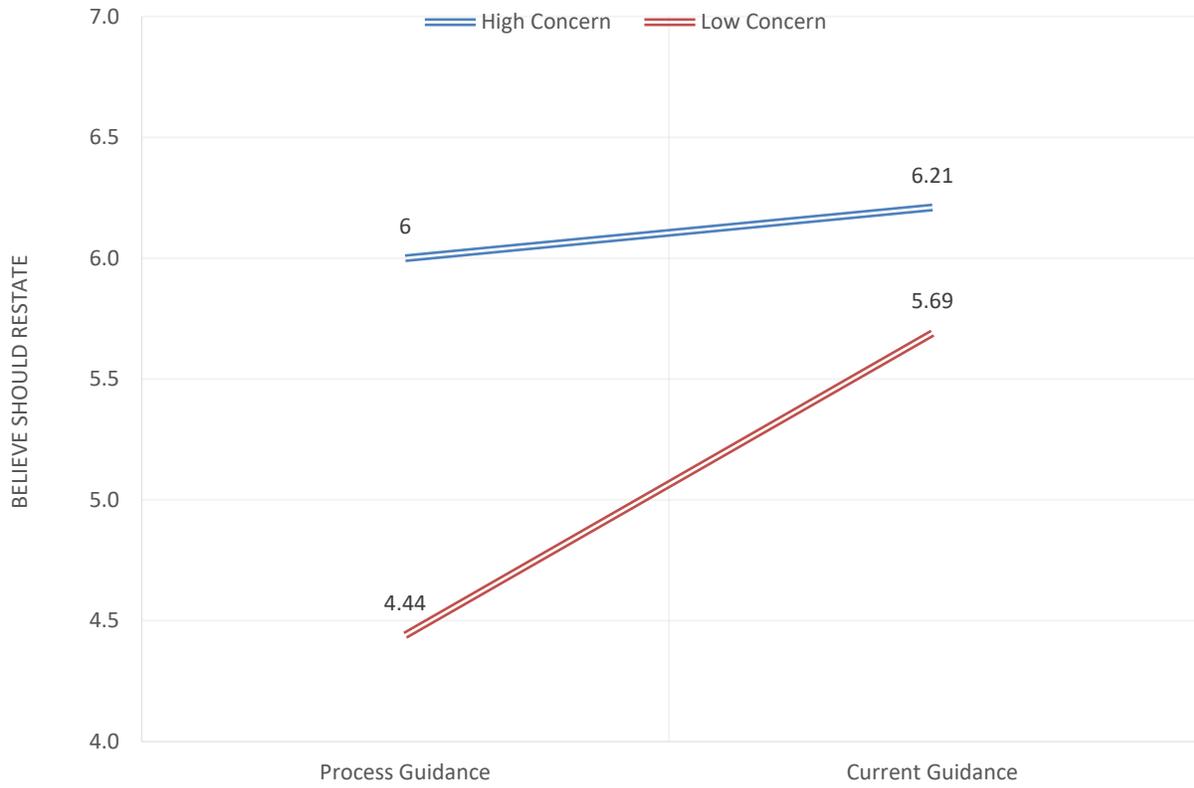


Figure 3-5. Experimental results: Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Process) on Belief that Financials Should be Restated

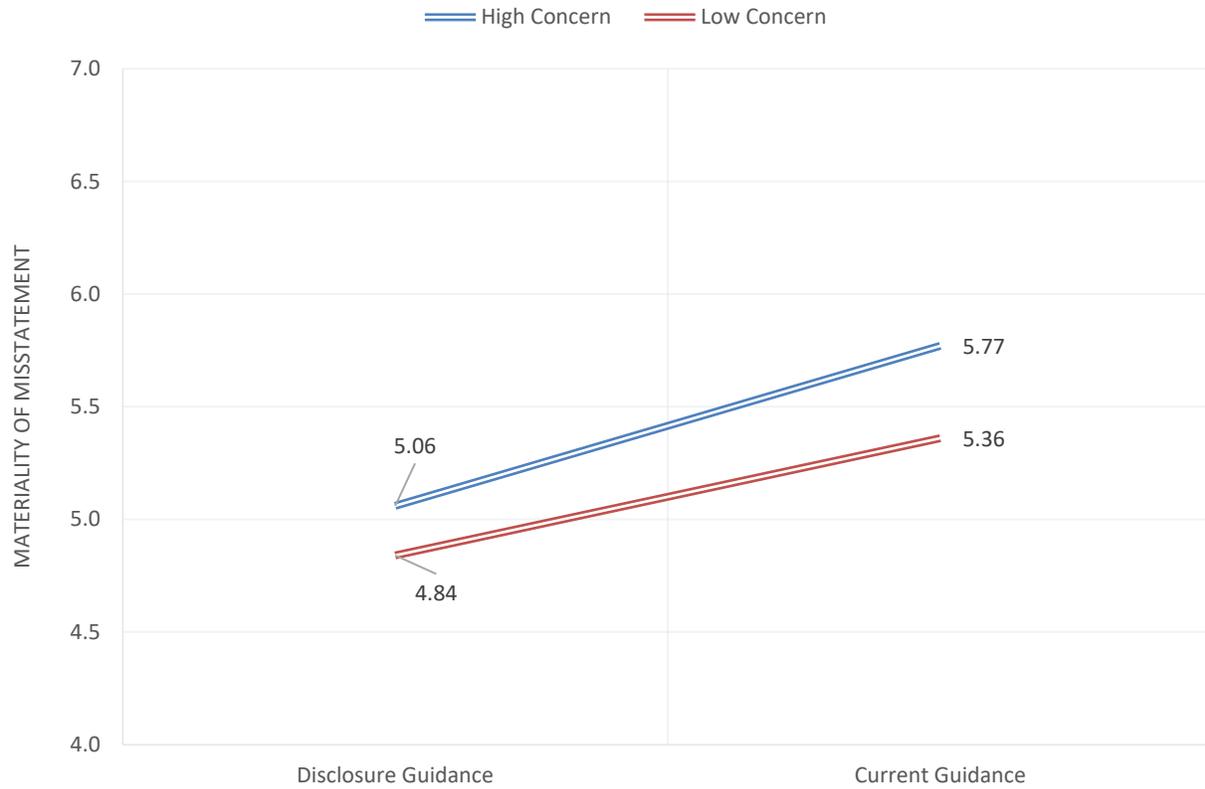


Figure 3-6. Experimental results: Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Disclosure) on Materiality of a Financial Statement Misstatement

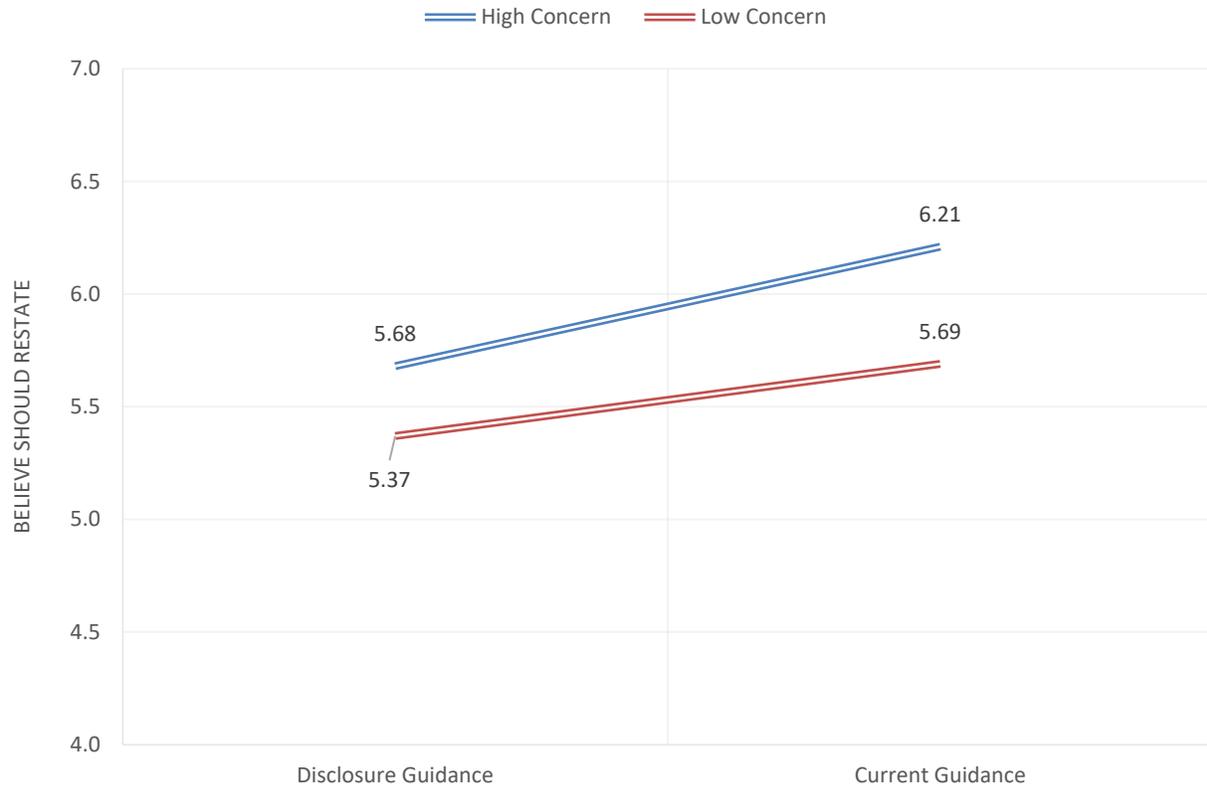


Figure 3-7. Experimental results: Expressed User Concern in a Financial Disclosure (High, Low) and Authoritative Guidance (Current, Disclosure) on Belief that Financials Should be Restated

## CHAPTER 4 CONCLUSIONS

The materiality concept can be thought of as both an obligation on managers and as a safe harbor for managers. On the one hand, management has the ultimate responsibility to make sure that financial disclosures are materially correct (AICPA 2002). Having financial statements that are found to be materially misstated exposes managers to a number of risks, including litigation risk, regulatory risk, and the risk of an adverse market reaction (Palmrose & Scholz 2004). On the other hand, accounting principles state that the cost of producing accurate financial information should not outweigh the benefits of that information (FASB 2010). Accordingly, misstatements that are deemed to be immaterial provide managers some level of safety from those risks. Determining the materiality of financial disclosures is therefore a serious matter.

Authoritative bodies, such as the FASB, the SEC, and the Supreme Court, have defined materiality in terms of whether a disclosure would affect a user's economic decision-making (FASB 2010) or if the user would consider the disclosure to be relevant to the "total mix" of information (Oesterle 2011, PCAOB 2010b). Given the wide range of stakeholders that might rely on a firm's financial disclosures, determining materiality is inherently an ill-structured problem (Krogstad et al 1984; Abdolmohammadi & Wright 1987; Carpenter & Dirsmith 1992). And, given the cognitive and social demands of ill-structured problem-solving, it is perhaps not surprising that the materiality concept has been operationalized in practice through the use of quantitative rules of thumb, such as 5% of net income. Nonetheless, the discrepancy between the theoretical conceptualization of materiality and its practical operationalization has led authoritative bodies to provide guidance to managers that materiality judgments should not over-rely on mechanical formulas such as quantitative rules of thumb. Authoritative guidance has also

provided lists of circumstances (“qualitative considerations”) where quantitative rules of thumb may be particularly inappropriate (SEC 1999; PCAOB 2010a).

In Chapter 2, I examine what is possibly an unintended consequence of the current authoritative guidance on qualitative materiality. Experimental evidence indicates that participants (playing the role of managers in a simulation) integrate the expressed concerns of users into their decision-making on materiality more when the authoritative guidance is not presented to them than when it is. I attribute this result to a compliance mentality among managers such that managers respond to what they perceive to be the expectations of authorities to the exclusion of other inputs from the business environment. That is, even though part of the authoritative guidance is reminding managers that materiality judgments should be driven by the needs of users, managers respond to other cues in the authoritative guidance (e.g., warnings about not over-relying on rules of thumb, qualitative concerns about misstatements that improve management compensation) to the exclusion of the expressed concerns of users.

In Chapter 3, I explore two regulatory alternatives that might diminish the unintended consequences that arise from the compliance mentality of managers. In the context of judgments of materiality, authoritative bodies want some input, but nonetheless they recognize that important inputs must come from information that managers have in their specific business environment. That is, authorities may want managers to pay attention to their reminders about the proper conceptualization of materiality, as well as the circumstances they have identified where quantitative rules of thumb are particularly questionable, but they presumably do not intend managers to ignore other relevant information. From a regulatory point of view, the problem can be stated as follows: given the compliance mentality of managers, how can authorities provide input into managerial decision-making on materiality without impairing

managers' use of other relevant information? Better yet, can authorities provide input into managerial decision-making while encouraging the use of other relevant information?

The first alternative form of authoritative guidance I examine seeks to impose on managers a process designed to improve decision-making for ill-structured problems. In developing this alternative authoritative guidance, I draw from two research areas. First, research on regulation indicates that different regulatory logics are appropriate for different situations. In situations where authorities either cannot determine or cannot monitor bright-line standards of performance, such as with judgments of materiality, a reflexive regulatory logic may be appropriate (Gunningham & Holley 2016). Operating under such a logic, authorities focus on establishing processes for managers and stakeholders to develop mutual learning about their needs and concerns (Freeman 1997; Gaines & Kimber 2001). Research on process accountability indicates that holding people accountable for decision-making processes (rather than decision outcomes) leads decision-makers to include more information in their decision-making (Simonson & Staw 1992; Siegel-Jacobs & Yates 1996; Brtek & Motowidlo 2002; Scholten, van Knippenberg, Nijstad & De Dreu 2007; Cornell, Eining & Hu 2011).

As for the process itself that authorities might make managers accountable to, I draw from research on ill-structured problem-solving since determining materiality is an ill-structured problem. Research shows that people with experience in ill-structured problem-solving follow a number of steps that include problem conceptualization, an enumeration of the relevant concerns of different stakeholders as well as alternative problem solutions, and a justification of chosen solution (Jonassen 1997). Furthermore, educational research shows that prompts ("scaffolds") can be employed to guide decision-makers through the steps for solving ill-structured problems (Cho & Jonassen 2002; Ge & Land 2003; Chen & Bradshaw 2007).

The second alternative form of authoritative guidance I examine follows a traditional disclosure-oriented approach in securities regulation by imposing on managers that they disclose all non-trivial misstatements found in previously issued financial statements, whether they intend to reissue those financial statements or not. While disclosure regulation often has the goal of increasing information efficiency (Mahoney 1995; Healy & Palepu 2001), in this case the regulatory goal would be greater transparency. Accounting research indicates that mandatory disclosures can affect managers' voluntary disclosures (Dye 1985; Gigler & Hemmer 2001; Einhorn 2005; Ball et al 2012), and broader research on transparency-increasing regulation shows that greater transparency can encourage managerial behavior to be better aligned with the public welfare (Mahoney 1995; Healy & Palepu 2001; Weil et al 2006; Chatterji & Toffel 2010). I expected that the public disclosure of a misstatement would lead managers to anticipate how investors would react to management's assessment of the materiality of the misstatement and whether to reissue the affected financial statements. Accordingly, I predicted that managers would be more (less) likely to consider the misstatement to be material (and have a stronger belief in the need to restate the financials) when managers know that investors do (do not) consider the line items containing the misstatement to be important.

In an experimental setting, I test each of these alternative forms of authoritative guidance. The experimental results provide evidence that participants subject to a process-oriented authoritative guidance integrate the expressed concerns of users into their decision-making on materiality more than participants subject to the current authoritative guidance. Under the current authoritative guidance, participants judged the materiality of the misstatement to be relatively high (and had a relatively high belief that the financials should be restated) even when users expressed that the financial statement line item was not important to them. Under the process-

oriented authoritative guidance, however, participants judged the materiality of the misstatement to be relatively high (and had a relatively high belief that the financials should be restated) when users expressed that the financial statement line item was important to them and judged the materiality (and belief in restating) to be relatively low when users expressed that the financial statement line item was not important to them.

The experimental results do not, however, support the effectiveness of a disclosure-oriented authoritative guidance in getting managers to integrate the expressed concerns of users into their decision-making on materiality. Research on disclosure indicates that greater transparency does not always have the intended effect of making managers more responsive to the needs of users and other stakeholders (Cain et al. 2005; Sachdeva et al. 2009; Ripken 2009). Perhaps, in this context, participants approached the mandatory disclosure from a compliance mentality centered around trying to determine which disclosure would satisfy regulators rather than focusing on the impact of the disclosure on users.

Taken together, the experiments from Chapter 2 and Chapter 3 expand our understanding of managerial judgments of materiality, a subject that has been relatively neglected in accounting research (Messier et al. 2005). Given that managers have the ultimate responsibility for ensuring that financial disclosures are materially correct, it is important for accounting research to address this neglect.

APPENDIX A  
CURRENT GUIDANCE ON QUALITATIVE MATERIALITY

**General guidance on qualitative materiality (from the SEC’s Staff Accounting Bulletin 99)**

“The use of a percentage as a numerical threshold, such as 5%, may provide the basis for a preliminary assumption that – without considering all relevant circumstances – a deviation of less than the specified percentage with respect to a particular item on the registrant's financial statements is unlikely to be material. The staff has no objection to such a "rule of thumb" as an initial step in assessing materiality. But quantifying, in percentage terms, the magnitude of a misstatement is only the beginning of an analysis of materiality; it cannot appropriately be used as a substitute for a full analysis of all relevant considerations. Materiality concerns the significance of an item to users of a registrant's financial statements. A matter is "material" if there is a substantial likelihood that a reasonable person would consider it important.”

**Specific guidance on qualitative materiality (from the SEC’s Staff Accounting Bulletin 99)**

- “whether the misstatement arises from an item capable of precise measurement or whether it arises from an estimate and, if so, the degree of imprecision inherent in the estimate
- whether the misstatement masks a change in earnings or other trends
- whether the misstatement hides a failure to meet analysts' consensus expectations for the enterprise
- whether the misstatement changes a loss into income or vice versa
- whether the misstatement concerns a segment or other portion of the registrant's business that has been identified as playing a significant role in the registrant's operations or profitability
- whether the misstatement affects the registrant's compliance with regulatory requirements
- whether the misstatement affects the registrant's compliance with loan covenants or other contractual requirements

- whether the misstatement has the effect of increasing management's compensation – for example, by satisfying requirements for the award of bonuses or other forms of incentive compensation
- whether the misstatement involves concealment of an unlawful transaction.”

APPENDIX B  
TEXT OF EXPERIMENTAL MANIPULATIONS

**Expressed User Concern manipulation: High (Low)**

As CFO of Macon Railway Corporation, your conclusion from interacting with both analysts and investors is that they (do not) pay close attention to the compensation and benefits expense and the compensation to revenue financial ratio. This conclusion is based upon the following:

- Analysts (do not) ask questions about these items during conference calls.
- Analyst reports, written for investors, (do not) mention these items.
- (Neither) Analysts and (nor) investors bring these matters up in private meetings and other forums.

**Authoritative Guidance manipulation: Current Guidance (No Guidance)**

The Securities & Exchange Commission (SEC) provides the following general guidance on materiality:

The SEC has no objection to the use of a numerical threshold, such as 5%, as an initial step in assessing materiality. However, this step cannot be used as a substitute for a full analysis of all relevant considerations. A matter is ‘material’ if there is a substantial likelihood that a reasonable person would consider it important.

In addition to the general guidance above, the SEC has also provided a list of situations where users may be particularly sensitive to errors in financial disclosures. Included on this list is “errors that have the effect of increasing management’s compensation.”

(Nothing is shown in the No Guidance condition.)

### **User Attention manipulation: High (Low)**

As CFO of Macon Railway Corporation, your conclusion from interacting with both analysts and investors is that they (do not) consider the compensation and benefits expense and the compensation to revenue financial ratio to be important. This conclusion is based upon the following:

- Analysts (do not) ask questions about these items during conference calls.
- Analyst reports, written for investors, (do not) mention these items.
- (Neither) Analysts and (nor) investors bring these matters up in private meetings and other forums.

### **Authoritative Guidance manipulation: Process Guidance**

Assume that the SEC requires firms to document their decision-making process for whether to reissue financial statements or not. The SEC's policy is not to determine whether the firm's decision is appropriate but only to determine that the decision is consistent with the firm's reasoning for the decision.

To document the firm's decision-making process, please fill out the following form that has been provided by the SEC:

1. In your opinion, what is the nature of the problem that a manager is solving when the manager makes a materiality decision?
2. Provide a list of reasons (if there are any) for *not* reissuing financial statements.
3. Provide a list of reasons (if there are any) for reissuing financial statements.
4. State whether you think the firm should restate its financials and provide a brief justification for that conclusion.

### **Authoritative Guidance manipulation: Disclosure Guidance**

Assume that, when a firm discovers an error in a previously issued financial statement, the SEC requires the firm to make a disclosure to the public shortly thereafter to document the nature of the error and the firm's decision of whether or not it will restate the firm's financials.

Please select the disclosure below that you would most likely recommend be made to the public:

- “Macon Railway Corporation has discovered that, in its 2016 income statement, Compensation and benefits expense was understated by \$78 million, leading to an overstatement of net income. Macon Railway Corporation has decided that the error is not sufficiently material to justify reissuing prior financial statements.”
- “Macon Railway Corporation has discovered that, in its 2016 income statement, Compensation and benefits expense was understated by \$78 million, leading to an overstatement of net income. Macon Railway Corporation has decided that the error is sufficiently material to justify reissuing prior financial statements.”

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## BIOGRAPHICAL SKETCH

Edward Thomas received a Bachelor of Arts degree with a major in philosophy from Claremont McKenna College in 1988. He received a doctorate in the field of philosophy from Emory University in 1998 and taught philosophy at Mercer University from 1996 to 2009. Edward briefly left the academic world when he worked as a staff auditor at the CPA firm Butler, Williams & Wyche, LLP in Macon, Georgia from 2009 – 2012. While practicing as a certified public accountant, Edward received a Master of Accountancy from Georgia College & State University in 2009. He will receive his Doctor of Philosophy with a major in Business Administration – Accounting from the University of Florida in 2017.