

# The Effect of Real Earnings Management on Auditor Scrutiny of Management's Other Financial Reporting Decisions

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**ABSTRACT:** Recent research reveals that accruals-based earnings management (AEM) is decreasing while real earnings management (REM) is increasing, suggesting the correlation is due to regulatory scrutiny. However, based on Correspondent Inference Theory, we predict and find that when management uses REM, auditors are more restrictive of management's subjective estimates, making it more difficult for management to use income-increasing AEM. Our experiment manipulates the presence versus absence of REM, and whether the audit difference potentially impacts the client's ability to meet an earnings target. Using a serial mediation model, we find that when auditors observe REM, they perceive these operating decisions as aggressive, leading them to perceive management as aggressive, ultimately causing greater proposed adjustments on an unrelated audit difference. We contribute to the literature by demonstrating that when auditors observe REM, their altered perceptions about management can cascade, affecting how they respond to management estimates in unrelated financial statement accounts.

**Keywords:** audit; discretionary accruals; dispositional inferences; qualitative materiality; real earnings management.

## I. INTRODUCTION

While research indicates that managers' use of real earnings management (REM) to achieve earnings targets is increasingly pervasive (e.g., [Graham, Harvey, and Rajgopal 2005](#); [Cohen, Dey, and Lys 2008](#)), limited research investigates how REM affects auditors' judgments and decisions. Research examining how auditors react to REM is important because auditors play a critical monitoring role within the financial reporting process, and their reactions likely influence REM's effectiveness. We report the results of an experiment in which we predict and find that a client's use of REM increases auditor scrutiny of management's unrelated financial reporting decisions (e.g., estimates) to such an extent that it could impact externally reported financial information. Auditors' reactions result from dispositional inferences that cascade from observed REM behavior (i.e., aggressive) to other auditor judgments about management (i.e., inferred as aggressive). Auditors' reactions are particularly evident in settings where standards do not require auditors to consider making an adjustment (i.e., the audit difference is neither quantitatively nor qualitatively material).

Prior research clearly shows that auditors often constrain clients' use of accruals-based earnings management (AEM) ([Hirst 1994](#); [Kinney and Martin 1994](#); [Gaver and Paterson 2001](#); [Nelson, Elliott, and Tarpley 2002](#)). In contrast, prior research

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generally posits that because REM does not violate Generally Accepted Accounting Principles (GAAP), it is not likely to draw auditor scrutiny (Roychowdhury 2006; Cohen et al. 2008; Demers and Wang 2010). However, recent research suggests that auditors certainly notice REM (Commerford, Hermanson, Houston, and Peters 2016) and that REM affects audit fee decisions (Greiner, Kohlbeck, and Smith 2017), client retention decisions (Kim and Park 2014), and the auditor-client relationship (Commerford, Hermanson, Houston, and Peters 2017). Taken together, research suggests that REM influences how auditors view and respond to other, unrelated audit issues.

Based on Correspondent Inference Theory (CIT), we predict that auditors will propose larger audit adjustments related to management's estimates when they observe REM. CIT posits that observers draw inferences about another individual's disposition (e.g., integrity, aggressiveness) based on the characteristics of the behavior exhibited by that individual (Jones and Davis 1965; Jones and Harris 1967; Ajzen and Holmes 1976). When the observed behavior appears to be discretionary, deviates from expectations, and has consequential effects—all of which are key features of REM—observers tend to make strong inferences about the individual. More specifically, theory indicates that forming dispositional inferences is a two-stage process in which individuals first observe a specific behavior and *classify* that behavior on a continuum regarding the trait (e.g., aggressiveness) inferred from that behavior (Reeder and Brewer 1979). Second, the classification forms the basis for a more general *characterization* about the observed actor's disposition. In our context, the auditor observes REM, *classifies* the aggressiveness of management's operating decision, and then infers whether management's disposition also is aggressive (*characterization*). We use a serial mediation model, based on CIT, to predict that the impact of REM on auditors' proposed adjustments is explained by auditors' resulting *classification* of management's previous actions and the subsequent *characterization* of management's disposition.

Research has demonstrated that the dispositional inference process described by CIT is spontaneous and effortless (e.g., Uleman, Newman, and Moskowitz 1996), suggesting that auditors likely form dispositional inferences without explicitly considering audit standards. Consequently, the dispositional inferences that auditors derive from observing REM can cause auditors to propose adjustments that they otherwise would not. To better understand the extent to which REM influences auditors' proposed adjustments, we examine how auditors react to REM in a setting in which standards suggest that auditors should consider constraining management's estimate, and also in a setting in which audit standards are less prescriptive. For example, when management's estimates result in small audit differences that are qualitatively material, auditors should be more likely to require adjustments for those differences (Securities and Exchange Commission [SEC] 1999; Public Company Accounting Oversight Board [PCAOB] 2010). In contrast, audit standards do not require auditors to adjust such audit differences when the differences lack characteristics indicative of qualitative materiality. However, based on our prediction that REM will cause auditors to perceive management as aggressive, as well as the automatic and robust effect of CIT in psychology literature, we expect that REM will yield greater proposed audit adjustments, even when the audit difference in question is not qualitatively material.

To examine these issues, we conduct a  $2 \times 2$  between-subjects experiment, manipulating the presence versus absence of REM and whether the audit difference potentially affects the client's ability to meet an earnings target (i.e., potential earnings target impact [PETI]). We ask experienced auditors (primarily managers and partners) to make a decision related to a quantitatively immaterial audit difference arising from management's estimate for the allowance for doubtful accounts. Consistent with theory, we find that the presence of REM causes auditors to propose larger adjustments. Furthermore, consistent with a cascading effect of dispositional inferences, auditors' perceptions of the aggressiveness of management's operating decisions and the aggressiveness of management in general are causally linked, such that these perceptions sequentially mediate the effect of REM on auditors' adjustment decisions. Finally, we find a significant interaction, which suggests that the distinct effect of REM is most evident when the audit difference is not qualitatively material, thereby demonstrating that the impact of REM is robust (i.e., it influences auditor judgments even when regulatory guidance does not require consideration of an adjustment).

We also perform additional analyses to investigate two potential alternative explanations associated with perceptions of risk and fairness. We find that REM causes auditors to believe that there is a higher risk associated with management's other estimates and that REM causes auditors to perceive the financial statements to be less fair. However, mediation results do *not* support either alternative explanation, as neither measure mediates the relationship between REM and auditors' proposed adjustments. Rather, REM causes larger proposed audit adjustments because of the cascading effect of dispositional inferences.

Our study informs practice and research in several ways. Ours is the first study to provide evidence that REM alters auditors' perceptions in such a way that it affects how auditors evaluate management's other judgments (e.g., estimates). Such evidence is particularly interesting because it demonstrates that observing REM can cause auditors to make decisions not directly related to the observed REM. We also contribute to extant accounting and psychology literature by providing evidence, through serial mediation, of a cascading effect of dispositional inferences. While existing accounting research uses CIT to demonstrate that the nature of management's actions affects auditor perceptions of management, as well as how auditors respond to those specific actions (Wong-On-Wing, Reneau, and West 1989; Reckers and Wong-On-Wing 1991; Commerford et al. 2017), extant research

has not explored the extent to which dispositional inferences cascade and, therefore, impact audit decisions that clearly are unrelated to the observed actions. The impact of this finding likely is especially relevant in audit contexts, because auditors continuously observe management's decisions and draw conclusions about the implications of those decisions.

We also contribute to prior audit literature that demonstrates that management attitudes are related to risk perceptions (e.g., [Albrecht and Romney 1986](#); [Loebbecke, Eining, and Willingham 1989](#); [Beaulieu 2001](#)). Such literature generally shows that certain management attitudes can influence auditors' perceptions of risk and, in some cases, audit effort. However, our findings go beyond general measures of risk and effort, and demonstrate that perceptions of management, inferred from management's use of REM, influence specific auditor decisions that potentially alter financial statement content.

Additional analyses suggest that REM likely impacts auditor judgments beyond the specific management estimate examined in our experiment. Specifically, while we consider the allowance for doubtful accounts balance, we find that REM also causes auditors to perceive a higher risk that management's other estimates are unreasonable. Our serial mediation analysis confirms that the result also is attributable to the cascading of dispositional inferences. Consequently, the inferences that auditors make about management's disposition based on observed actions appear to have far-reaching effects, likely explaining why REM is positively associated with audit fees ([Greiner et al. 2017](#)) and auditor resignations ([Kim and Park 2014](#)).

Our study also contributes to prior research concerning qualitative materiality, which generally indicates that auditors are not likely to adjust quantitatively immaterial audit differences when doing so would cause the client to miss an earnings target (e.g., [Libby and Kinney 2000](#); [Ng and Tan 2003, 2007](#); [Ng 2007](#)). However, our results indicate that in the current audit environment, auditors are *more* likely to adjust quantitatively immaterial differences when they impact the client's ability to meet an earnings target. That is, pursuant to the passage of Auditing Standard (AS) 2810 (previously AS No. 14) and other relevant guidance, auditors are more sensitive to qualitative materiality. Interestingly, our results suggest that observing REM affects auditors' adjustment decisions in a manner similar to the presence of a qualitative materiality factor. That is, the occurrence of PETI or REM yields similarly sized proposed audit adjustments, while the occurrence of both has no incremental impact on the proposed adjustment.

Finally, our results also inform the earnings management literature. Archival research indicates that while AEM has decreased in recent years, the relative level of REM has increased ([Cohen et al. 2008](#)). Research widely suggests that these trends are attributable to increased auditor scrutiny of management's estimates and accruals, which, in turn, has prompted managers to rely more on REM to achieve earnings targets (e.g., [Ewert and Wagenhofer 2005](#); [Cohen et al. 2008](#); [Chi, Liscic, and Pevzner 2011](#); [Evans, Houston, Peters, and Pratt 2015](#)). However, our study's findings suggest that auditors' reactions to REM also contribute to the inverse relationship between AEM and REM observed in archival data, as REM causes auditors to constrain management's accruals, perhaps attenuating the overall impact that REM can have on the financial statements.

## II. BACKGROUND AND HYPOTHESES DEVELOPMENT

Prior research has defined earnings management as purposeful, non-neutral intervention in the financial reporting process with the intent of obtaining some private gain ([Schipper 1989](#)). The majority of accounting research concerning earnings management has focused on how and when management uses the subjectivity inherent in accrual accounting to opportunistically impact financial reporting results (i.e. AEM).<sup>1</sup> Alternatively, management can use real operating, financing, and investing decisions (i.e., REM) to opportunistically alter earnings ([Graham et al. 2005](#); [Roychowdhury 2006](#); [Xu, Taylor, and Dugan 2007](#)). REM is defined as "departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations" ([Roychowdhury 2006](#), 337).

Research suggests that managers increasingly use REM to meet financial reporting benchmarks ([Graham et al. 2005](#); [Cohen et al. 2008](#)). For example, 80 percent of financial executives surveyed by [Graham et al. \(2005\)](#) indicated that they are willing to reduce discretionary spending on items such as advertising and research and development in order to meet a quarterly earnings target. Although auditors play a critical monitoring role within the financial reporting process, very little is known about how auditor decisions regarding other financial statement areas (e.g., management's estimates) are impacted when auditors observe REM.

### REM and Correspondent Inference Theory

Research generally posits that because REM does not violate GAAP, it likely does not draw auditor scrutiny ([Roychowdhury 2006](#); [Cohen et al. 2008](#); [Demers and Wang 2010](#)), and that increased regulator and auditor scrutiny of AEM has caused managers

<sup>1</sup> [Healy and Wahlen \(1999\)](#), [Dechow and Skinner \(2000\)](#), and [Habib and Hansen \(2008\)](#) provide comprehensive reviews of the earnings management literature.

to substitute REM for AEM (Cohen et al. 2008; Evans et al. 2015). Accordingly, Chi et al. (2011) find a positive association between REM and high-quality auditors. However, recent interview and experimental evidence suggests that auditors are aware of REM and that, in some situations, REM can heighten auditors' perceptions of audit-related risks and strain the auditor-client relationship (Commerford et al. 2016, 2017).<sup>2</sup> Archival research has begun to examine the association between REM and auditor decisions (Kim and Park 2014; Greiner et al. 2017). Greiner et al. (2017) suggest that audit fees increase with a client's use of REM, and Kim and Park (2014) suggest that auditors are less likely to retain clients that engage in REM. Although these findings are consistent with the notion that REM broadly influences auditors' perceptions of the client and its actions, archival or qualitative methods cannot demonstrate a causal link between REM and these auditor decisions. Further, existing studies do not provide a decisive explanation for why REM could impact auditor decisions that are unrelated to the REM.

CIT suggests that auditors' responses to REM could be attributable to concerns regarding management's propensity to be aggressive. CIT posits that individuals tend to think "you are what you do." Consequently, observers are likely to draw inferences about an individual's disposition (e.g., integrity, aggressiveness) based on the characteristics of observed behavior (Jones and Davis 1965; Jones and Harris 1967; Ajzen and Holmes 1976). The theory posits that dispositional inferences are more likely when an individual's observed behavior appears to be volitional, when the behavior deviates from the observer's expectations for the observed individual's behavior, and when that behavior has consequential effects (Jones and Davis 1965; Jones and Harris 1967; Vonk 1998).<sup>3</sup> These three behavioral characteristics, which yield stronger dispositional inferences, are consistent with REM. Specifically, REM represents discretionary (i.e., volitional) business decisions that deviate from the normal course of business (i.e., deviate from expectations), where management's goal is to opportunistically alter reported earnings (i.e., consequential effects). Accordingly, when auditors observe REM (i.e., aggressive operating decisions), we expect them to make strong dispositional inferences regarding management's aggressiveness.

Existing accounting research has employed CIT to demonstrate that the nature of management's actions affects auditor perceptions of management, as well as how auditors respond to those observed management actions (Wong-On-Wing et al. 1989; Reckers and Wong-On-Wing 1991; Commerford et al. 2017). For example, Reckers and Wong-On-Wing (1991) manipulate whether a discretionary management estimate advantageously alters an earnings trend and whether management's estimation process deviates from industry norms. Results indicate that both factors cause auditors to make inferences regarding management's motives, which then influence the auditors' perception of materiality and their likelihood of agreeing with management's estimate.<sup>4</sup> However, our study more specifically examines the inference process by which auditors develop perceptions of management based on observed management actions. Further, we explore the extent to which these dispositional inferences about management, resulting from management's use of REM, affect how auditors respond to other management decisions that are completely *unrelated* to the observed REM.

### The Cascading of Dispositional Inferences

We posit that auditors' inferences regarding management's aggressiveness will cascade to their perception of other, unrelated managerial judgments. Reeder and Brewer (1979), in their model for dispositional attribution, propose that individuals employ a two-stage process when making inferences about others' dispositions. First, individuals classify the observed action by placing it along a continuum of the social attribute under consideration. Observing a behavior actually initiates the *classification* of such behavior. For example, when an observer sees a partygoer spilling a drink, the observer classifies that person's action on a continuum of clumsiness, a classification that would not have occurred without observing the action. It also is important to note that because of time and cognitive limitations, observers likely form inferences based on relatively few observed attributes (Wegner 1977; Reeder and Brewer 1979; Ambady and Rosenthal 1992).<sup>5</sup> Second, individuals use the resulting classification as the basis for making a *characterization* about the observed person. Individuals use preexisting assumptions about how such classifications relate to the observed actor's disposition. Once the observer makes a dispositional inference, theory suggests that those reflexive inferences will cascade, yielding an expectation that the observed

<sup>2</sup> In a different setting, Johnson, Kuhn, Apostolou, and Hassell (2013) demonstrate that apparent management narcissism increases perceived audit risk.

<sup>3</sup> We note that, although related, CIT and general Attribution Theory are distinct from each other. Attribution Theory describes how individuals develop causal explanations for observed behavior based on available information (Kelley 1973; Taylor and Fiske 1975). In contrast, CIT is focused on the conditions in which observed behaviors cause individuals to make dispositional inferences (i.e., dispositional attributions) about the observed person. In our study, we examine how REM can affect perceptions of management and how those perceptions affect auditors' subsequent judgments. Accordingly, we base our predictions on CIT.

<sup>4</sup> Wong-On-Wing et al. (1989) use CIT in a similar manner to investigate factors that influence how auditors respond to the sale of a long-term asset at a gain. They find that auditors are most likely to make dispositional inferences about management when the transaction deviates from expectations and when management has a high degree of discretion. Additionally, these inferences affect auditors' disclosure and materiality judgments pertaining to the asset sale. Commerford et al. (2017) use CIT to investigate how auditors differentiate REM from normal business transactions.

<sup>5</sup> Similarly, on any given audit engagement, there are limited opportunities to observe and objectively classify the character of management, which causes significant weight to be given to perceptions drawn from observed decisions.

individual will behave similarly in other contexts (Newman and Uleman 1993; Nussbaum, Trope, and Liberman 2003; Ferguson, Bargh, and Nayak 2005).

Literature and theory regarding the cascading effect of dispositional inferences suggests that observing REM will influence auditors' subsequent judgments. That is, auditors will form inferences about management's disposition based on observed aggressive operating decisions (i.e., REM), which, in turn, causes auditors to believe that management itself is aggressive, and that those inferences will cascade, such that auditors also perceive other unrelated management decisions (e.g., estimates) to be aggressive. Thus, when addressing audit differences, the cascading effect of dispositional inferences suggests that auditors will propose larger audit adjustments in the presence of REM.

Following Reeder and Brewer's (1979) model for dispositional attribution, we expect the anticipated relationship between observing REM and the magnitude of subsequently proposed audit adjustments to be sequentially mediated by the causal relationship between the perceived aggressiveness of management's operating decisions (i.e., classification) and the perceived aggressiveness of management in general (i.e., characterization). That is, observing REM causes auditors to perceive management's operating decisions as aggressive, which, in turn, causes auditors to perceive management as having an aggressive disposition. Auditors then alter their unrelated judgments regarding the adjustment of management's estimates based on how they perceive management's disposition. Accordingly, we employ a serial mediation model to investigate whether the predicted relationship between REM and auditors' proposed adjustments is sequentially mediated by the causal relationship between the perceived aggressiveness of management's operating decisions and the perceived aggressiveness of management in general (see Figure 1). In summary, we hypothesize that the presence of REM will increase the magnitude of auditors' unrelated proposed audit adjustments, and that this effect is sequentially mediated as described above.

**H1:** The presence of REM will cause auditors to propose larger adjustments for audit differences that are unrelated to the REM.

**H2:** Auditors' perceptions of the aggressiveness of management's operating decisions and the aggressiveness of management will sequentially mediate the predicted relationship between REM and auditors' proposed adjustments.

## REM and Qualitative Materiality

It is important to note that CIT describes the psychological process for how dispositional inferences are made, and that the cascading of those dispositional inferences is likely to occur in a broad range of settings. Additionally, research has demonstrated that dispositional inferences are automatic and effortless (e.g., Uleman et al. 1996). As such, we expect the cascading effect of dispositional inferences resulting from REM to impact auditors' actions without regard to audit standards. Therefore, to better understand the extent to which REM can influence auditors' adjustment decisions, we examine how REM affects auditors' proposed adjustments in a setting in which audit standards suggest that auditors should consider constraining management's estimate, as well as a setting in which audit standards are not as prescriptive. Specifically, we consider an audit difference in two different materiality contexts.

Audit standards require auditors to consider whether differences between management's estimate and the auditor's independent estimate are quantitatively and/or qualitatively material when they are evaluating management's estimates (SEC 1999; PCAOB 2010). AS 2810 provides examples of factors that auditors should consider when determining whether an amount is qualitatively material. For example, auditors should consider whether an audit difference obscures a company's failure to meet analysts' consensus expectations or other financial reporting targets, such as debt covenants (SEC 1999; PCAOB 2010). Audit guidance suggests that when a quantitatively immaterial audit difference impacts a client's ability to meet an earnings target (i.e., there is a PETI), auditors should be more likely to propose an adjustment for that audit difference.<sup>6</sup> In contrast, standards do not require auditors to adjust audit differences when they are not quantitatively or qualitatively material (i.e., no PETI).

Furthermore, when auditors observe REM in settings in which the client narrowly beats an earnings target (i.e., PETI is present), they will perceive management's actions, including the use of REM, to be more consequential because without those

<sup>6</sup> Although we do not hypothesize a main effect, we expect that the presence of PETI alone will increase the likelihood that auditors propose an adjustment. Our expectation is partially supported by CIT, which suggests that the presence of PETI may result in relatively stronger dispositional inferences, as PETI arises when management's subjective (i.e., volitional) estimate differs from the auditor's expectation such that the company meets an earnings per share (EPS) forecast (i.e., consequential effect). Audit standards, which suggest that auditors should be more likely to adjust qualitatively material audit differences (i.e., when PETI is present), also partially support this expectation. However, prior research suggests that auditors are not likely to adjust quantitatively immaterial misstatements if doing so causes a client's earnings to fall below an EPS forecast (e.g., Libby and Kinney 2000; Ng and Tan 2003, 2007; Ng 2007). That said, these prior studies were conducted prior to the release of Staff Accounting Bulletin (SAB) No. 99, AS 2810, or similar audit guidance. Given that auditors are under more regulatory scrutiny than ever before (Joe, A. Wright, and S. Wright 2011; Talley 2006), we expect auditors to be more likely to propose an adjustment when an audit difference is qualitatively material, consistent with both audit standards and theory.

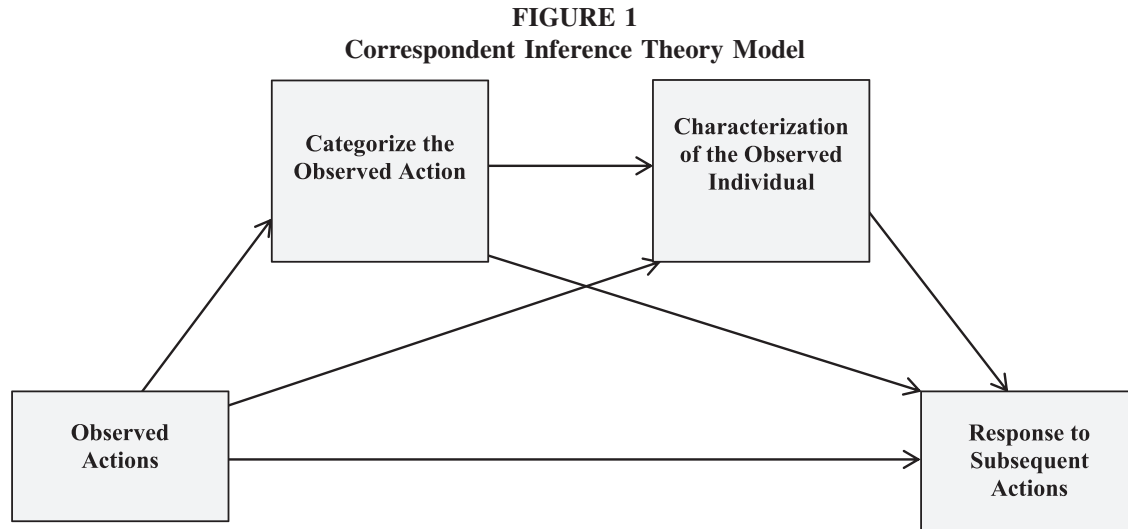


Figure 1 illustrates the two-stage process for developing dispositional inferences, as described by Reeder and Brewer (1979), and the model also depicts how the dispositional inferences resulting from one observed action affect how individuals respond to other subsequently observed actions.

actions, they likely would not have met the earnings target. Relatedly, the CIT literature shows that stronger dispositional inferences occur when the observed behavior appears to be more consequential (e.g., Vonk 1998). Accordingly, we expect that the simultaneous presence of both REM and PETI will result in the strongest dispositional inferences about management, such that auditors' proposed adjustments will be largest when both are present.

However, because the cascading effect of dispositional inferences is a spontaneous psychological process that is not bound to audit standards, we expect REM to affect auditors' reactions to an audit difference even when that difference is not material (quantitatively or qualitatively). That is, even when an audit difference is immaterial, such that an adjustment is not required, the presence of REM will create a perception that management, and its estimates, are aggressive, causing auditors to propose larger audit adjustments. In other words, we expect REM to cause auditors to propose adjustments to audit differences that they otherwise would not. The presumption that management's estimate is aggressive, absent any obligation to adjust, suggests an interactive effect of REM and PETI. To summarize, while we expect the cascading effect of dispositional inferences caused by REM to increase auditors' proposed adjustments in the presence of PETI, we expect that effect to be particularly evident when there are no other factors heightening auditor scrutiny of the audit difference (see Figure 2). The following hypothesis describes this interactive relationship:

- H3:** The effect of REM will be greater when the potential audit difference is not qualitatively material (i.e., PETI absent) compared to when the potential audit difference is qualitatively material (i.e., PETI present).

### III. METHOD

#### Participants

We obtained participants with the assistance of the Center for Audit Quality (CAQ) and through the authors' personal contacts. Auditors from several international public accounting firms (including auditors from each of the Big 4 firms) participated in the study. We provided the CAQ with a recruitment email. It invited auditors to participate in the study and provided a hyperlink to the case materials, which auditors accessed electronically through Qualtrics. CAQ personnel forwarded the email to contacts at each of the participating firms. We assured participating auditors that their identity and the identity of their firm would be confidential.<sup>7</sup> We used a similar process when obtaining participants through personal contacts.

<sup>7</sup> Two audit partners and four former auditors pilot-tested the instrument. Additionally, the instrument was thoroughly reviewed by firm representatives as part of the CAQ Access to Audit Personnel Program and approved by the Institutional Review Board (IRB) for Human Participants at the university from which the study was administered online.

**FIGURE 2**  
**Graphical Representation of Hypothesized Results**

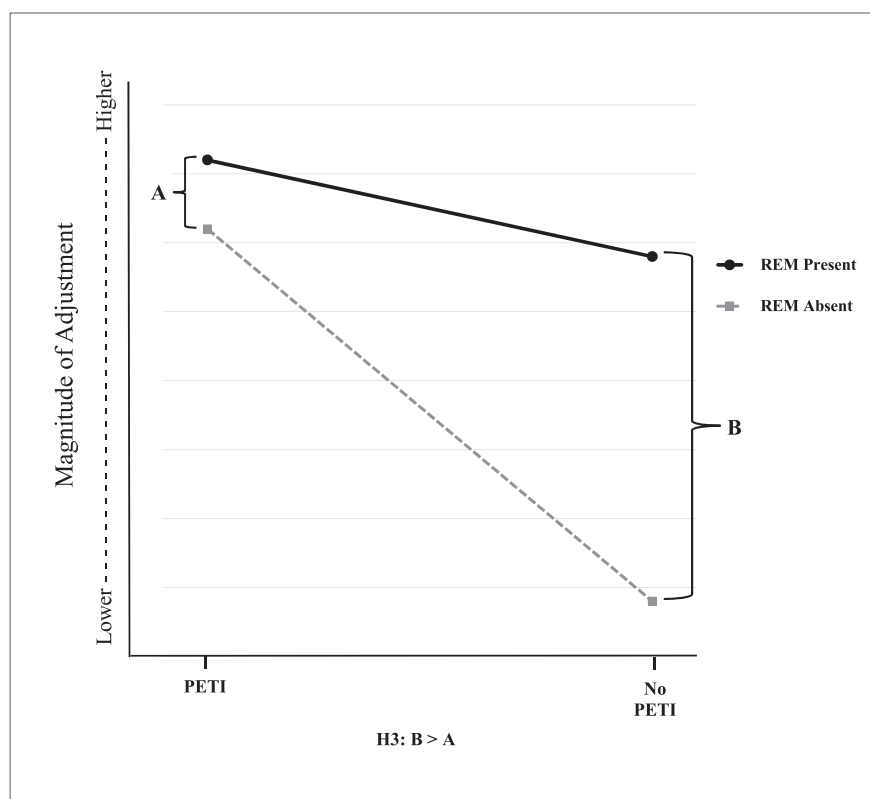


Figure 2 presents interaction effect that is predicted by H3.

The final sample includes responses from 115 auditors, consisting of 21 partners, 54 senior managers, 31 managers, seven seniors, and two directors.<sup>8</sup> Overall, participants had a mean of 11.2 years of audit experience and indicated that in a typical year, they spent 47.6 percent of their time working on public audit clients. Participants also indicated that in a typical year, they are very likely to make decisions related to proposed audit adjustments (mean of 9.3 on an 11-point scale, where 0 = very unlikely and 11 = very likely).

### Experimental Audit Case

Each participant assumed the role of manager on the financial statement audit of Active Tech Sportswear, Inc. (ATS), a hypothetical publicly traded sports apparel company. Participants first reviewed background and financial statement information, including ATS's unaudited earnings and analysts' consensus forecast for EPS, which we adapted from case materials developed by Libby and Kinney (2000) and Nelson, Smith, and Palmrose (2005).<sup>9</sup>

We employ a  $2 \times 2$  between-subjects factorial design in which we manipulate the presence or absence of PETI and the presence or absence of REM. We manipulate PETI by varying whether a quantitatively immaterial audit difference affects whether the client meets the analysts' consensus EPS forecast. We manipulate the EPS forecast at one of two levels (\$1.15 or \$1.19), while holding constant the financial statement information, including the company's annual unadjusted earnings (\$1.20 per share). Figure 3 depicts the experimental design.

<sup>8</sup> One hundred forty auditors provided complete responses. We excluded 25 cases from the final sample because of failed manipulation checks. One additional case was excluded because the participant proposed an audit adjustment of \$30.5 million, even though the potential audit difference was only \$3 million. We provide further discussion about manipulation checks in Section IV. Additionally, including participants' position (i.e., partner, senior manager, manager, senior, director) as a covariate does not alter any statistical conclusions.

<sup>9</sup> The hypothetical company described in the case materials, used by both Libby and Kinney (2000) and Nelson et al. (2005), is an auto parts manufacturer. We adapted the case materials for a similarly sized apparel company. Additionally, financial information was loosely based on an actual publicly traded apparel company.

**FIGURE 3**  
**Experimental Design**

	PETI	No PETI
<b>REM Present</b>	(1) Unadjusted EPS: \$1.20 per share Consensus EPS Forecast \$1.19 Estimate-related audit difference: \$0.02 Fully Adjusted EPS: \$1.18 ( <i>below</i> forecast) REM Earnings Benefit: \$0.02 increase	(2) Unadjusted EPS: \$1.20 per share Consensus EPS Forecast \$1.15 Estimate-related audit difference: \$0.02 Fully Adjusted EPS: \$1.18 ( <i>above</i> forecast) REM Earnings Benefit: \$0.02 increase
<b>REM Absent</b>	(3) Unadjusted EPS: \$1.20 per share Consensus EPS Forecast \$1.19 Estimate-related audit difference: \$0.02 Fully Adjusted EPS: \$1.18 ( <i>below</i> forecast) REM Earnings Benefit: none	(4) Unadjusted EPS: \$1.20 per share Consensus EPS Forecast \$1.15 Estimate-related audit difference: \$0.02 Fully Adjusted EPS: \$1.18 ( <i>above</i> forecast) REM Earnings Benefit: none

Figure 3 is an illustration of our 2 × 2 between-subjects experimental design.

In the case, participants learn about the existence of a subjective audit issue arising from management's estimate for the allowance for doubtful accounts. In all conditions, we informed participants that the magnitude of the difference (approximately \$3 million or \$0.02 per share) is less than the quantitative materiality threshold for the current ATS audit engagement. In all conditions, if auditors fully adjust the difference, then earnings would fall from \$1.20 to \$1.18. Consequently, in the *PETI* condition, where the EPS forecast is \$1.19, full adjustment prevents the company from reaching its EPS target. However, in the *No PETI* condition, where the EPS forecast is \$1.15, full adjustment does not impact whether the company achieves its EPS target.

In order to operationalize the presence or absence of REM, participants review observations from the audit team regarding management's operating decisions. In the REM conditions, the case materials indicate that management significantly reduced advertising expenditures during the fourth quarter of the current year.<sup>10</sup> Case materials specify that advertising expense was lower than expected (based on historical trends and amounts previously budgeted). The case materials also state that audit evidence suggests that "ATS's management reduced actual advertising expenditures late in 2013 in order to report more favorable net income," but that, based on other audit procedures and conversations with management, the audit team is "very confident that the reported advertising expense for 2013 is properly stated." We informed participants that the audit team estimates that management's advertising decisions increased earnings by approximately \$0.02 per share. In the conditions in which REM is absent, we told participants that reported advertising expense is in line with the audit team's expectations based on historical trends and previous budgets. We also informed participants in these conditions that the audit team is very confident that advertising expense is properly stated.

We asked all participants to indicate the magnitude of the adjustment that they would propose related to the audit difference.<sup>11</sup> Additionally, we asked auditors about their perceptions regarding the aggressiveness of management and their operating decisions in order to investigate whether a cascading effect of dispositional inferences explains why REM affects auditors' adjustment decisions. Specifically, we asked participants to use a nine-point scale (1 = not at all aggressive; 9 = highly aggressive) to assess, "How aggressive were management's advertising decisions?" Similarly, we asked participants (using the

<sup>10</sup> We chose advertising expenditures because it appears to be the method most commonly used by managers (Graham et al. 2005) and most commonly observed by auditors (Commerford et al. 2016).

<sup>11</sup> Consistent with Hatfield, Agoglia, and Sanchez (2008) and Hatfield, Houston, Stefaniak, and Usrey (2010), we focus on proposed audit adjustments, as they are the primary indicator of final adjustments. Joe et al. (2011) find that auditors waive only 24.2 percent of proposed audit adjustments, suggesting that proposed adjustments are predictive of the adjustments that management ultimately makes.



same scale), "How aggressive is ATS's management with regard to achieving financial reporting targets?" Finally, all participants completed manipulation check questions and questions about their relevant audit experience.

## IV. RESULTS

### Manipulation Checks

We manipulated PETI by varying analysts' consensus EPS forecast as either \$1.15 or \$1.19. When we asked participants to correctly identify the value of the analysts' consensus EPS forecast, 13 were unable to do so correctly. Additionally, we manipulated REM by varying whether advertising expense was significantly lower than expected (based on historical trends and amounts previously budgeted). Therefore, we ask participants to recall whether the advertising expense was lower than, higher than, or consistent with expectations. Twelve additional participants provided incorrect responses to this question. We eliminate these 25 responses from further analyses because participants did not correctly interpret the experimental manipulations; however, including these responses does not alter the study's conclusions.<sup>12</sup>

To further gauge the effectiveness of the REM manipulation, we ask two additional questions. First, we asked participants, "What is the likelihood that management used its discretion over advertising expenditures to report more favorable net income and EPS for 2013?" (1 = extremely unlikely; 9 = extremely likely). Second, we asked participants whether they agree (1 = strongly disagree; 9 = strongly agree) with the statement that "Based on audit testing and conversations with management, the amount reported for ATS's 2013 advertising expense was properly stated." These two questions allow us to determine whether participants perceived management's advertising decisions to be within-GAAP operational decisions consistent with the definition of REM.

Results indicate that we successfully manipulated REM. Participants assessed the likelihood that management used discretionary expenses to report more favorable earnings as higher in the presence of REM versus its absence (7.5 and 4.3, respectively;  $p$ -value < 0.01).<sup>13</sup> Additionally, across all conditions, participants' perceptions that advertising expense was properly stated were significantly higher than the scale midpoint (7.3 versus scale midpoint of 4.5;  $p$ -value < 0.01), and these perceptions did not differ in the presence versus absence of REM ( $p$ -value = 0.31).

### Tests of Hypotheses

We provide descriptive statistics and depict the magnitudes of auditors' proposed adjustments in Table 1, Panel A and in Figure 4. The pattern of means is largely consistent with our expectations. Specifically, when REM is absent and there is no PETI, the average proposed adjustment is \$1,763,630. In contrast, when REM and/or PETI are present, the average proposed adjustment is higher, ranging from \$2,362,258 to \$2,642,857. We formally test our predictions using ANOVA, with the magnitude of participants' proposed adjustment as the dependent measure.<sup>14</sup> We report ANOVA and planned comparison results in Table 1, Panels B and C.

In H1, we predict that the presence of REM will yield larger proposed audit adjustments. Consistent with H1, ANOVA results in Table 1, Panel B indicate a significant main effect for REM ( $p$ -value = 0.04, one-tailed). In H3, we predict that REM will have an incremental effect in the presence of PETI, resulting in larger proposed audit adjustments, but that the effect of REM will be more pronounced in the absence of PETI. In other words, H3 predicts a difference-in-differences, such that the effect of REM will be larger when PETI is absent (rather than present). Consistent with H3, the interaction between REM and PETI is significant ( $p$ -value = 0.01, one-tailed). Additionally, simple main effects (presented in Table 1, Panel C) show a significant simple effect of REM on the magnitude of auditors' proposed adjustments when PETI is absent ( $p$ -value < 0.01), but that the effect of REM is not significant when PETI is present ( $p$ -value = 0.69).

While our tests largely support H3, the observed interaction is not perfectly in line with our expectations. As depicted in Figure 4, the average proposed adjustment when both REM and PETI are present is actually *smaller* than when only PETI or

<sup>12</sup> When we include these responses in the analyses, our results improve slightly and our conclusions are unchanged. Specifically, we find a significant main effect for REM ( $p$ -value = 0.03, one-tailed) and a significant interaction ( $p$ -value < 0.01, one-tailed). When these responses are included in the serial mediation analysis, results indicate a significant indirect effect through both the perceived aggressiveness of the advertising decisions and the perceived aggressiveness of management (i.e., serial mediation; 95 percent CI = LL: 45.34; UL: 356.33).

<sup>13</sup> Throughout the paper, reported  $p$ -values are two-tailed unless noted otherwise.

<sup>14</sup> Consistent with Ng and Tan (2003), we also test our predictions using a binary version of our dependent measure. We convert participants' proposed adjustments into a dichotomous variable based on whether auditors propose full adjustment of the audit difference (full adjustment coded as 1, otherwise 0). The proportions of auditors proposing full adjustment, by condition, are similar to the mean pattern presented in Figure 4 and Table 1, Panel A. Specifically, when REM is absent and there is no PETI, only 48 percent of auditors propose full adjustment. The proportion of auditors proposing full adjustment is higher in the other three conditions, with proportions ranging from 74 percent to 86 percent. Additionally, we use a general linear model with logit link and a binomial distribution and find a significant interaction effect between REM and PETI ( $p$ -value = 0.01). However, neither main effect is significant (both  $p$ -value > 0.28).

**TABLE 1**  
**Analysis of Auditor Adjustment Decisions**

**Panel A: Magnitude (Std. Dev.) of Proposed Adjustments by Condition**

	<u>PETI</u>	<u>No PETI</u>	<u>Overall</u>
REM	\$2,362,258 (1,197,396) n = 31 [A]	\$2,642,857 (951,190) n = 28 [C]	\$2,495,424 (1,087,544) n = 59
No REM	\$2,482,759 (1,153,278) n = 29 [B]	\$1,763,630 (1,383,225) n = 27 [D]	\$2,136,036 (1,308,839) n = 56
Overall	\$2,420,500 (1,167,873) n = 60	\$2,211,236 (1,253,148) n = 55	\$2,320,417 (1,208,627) n = 115

**Panel B: ANOVA Results<sup>a</sup>**

<u>Source</u>	<u>df</u>	<u>Mean Square</u>	<u>F-stat</u>	<u>p-value</u>
Corrected Model	3	4,033,328.67	2.90	0.03
Intercept	1	613,585,200.00	441.03	<0.01
REM	1	4,126,874.61	2.97	0.04*
PETI	1	1,378,633.06	0.99	0.32
REM × PETI	1	7,164,964.07	5.15	0.01*
Error	111	1,391,250.64		

**Panel C: Simple Effect Comparisons<sup>a</sup>**

<u>Comparison</u>	<u>df</u>	<u>Mean Square</u>	<u>F-stat</u>	<u>p-value</u>
REM Absent/Present, PETI [A – B]	1	217,563.75	0.16	0.69
REM Absent/Present, No PETI [C – D]	1	10,625,800.20	7.59	<0.01*
PETI Absent/Present, REM [A – C]	1	1,158,351.04	0.98	0.33
PETI Absent/Present, No REM [B – D]	1	7,230,816.32	4.49	0.04

\* Expectation is directional; p-value is equivalent to a one-tailed test.

<sup>a</sup> The dependent variable (participants' proposed adjustment) is divided by 1,000 for purposes of tabulating the statistical analyses.

REM is present, although these differences are not statistically significant. Specifically, when REM is present, the simple effect for PETI is not significant (p-value = 0.34). Similarly, as previously noted, when PETI is present, the simple effect for REM is not significant (p-value = 0.69). Thus, our results reveal that REM and PETI have similar effects on the magnitude of auditors' proposed adjustments. That is, auditors' proposed adjustments are similarly larger when either (or both) factors are present, but REM does not have an incremental impact on auditors' proposed adjustments when PETI is already present.

In summary, we find that PETI and REM independently yield larger proposed adjustments to management's estimates. It is particularly interesting that REM affects proposed adjustments because the audit difference and REM are unrelated audit issues, suggesting that dispositional inferences play a key role in auditors' evaluations of management's estimates. These results also demonstrate that the effects of dispositional inferences on auditor judgments are robust and that the underlying psychological process freely operates within the audit environment.<sup>15</sup>

<sup>15</sup> We also asked participants to indicate a minimum acceptable adjustment and the adjustment amount they expect to be made after discussion with client management. Consistent with H1, we find that REM causes auditors to indicate larger minimum acceptable adjustments (p-value = 0.06, one-tailed) and to expect larger adjustment outcomes (p-value = 0.05, one-tailed), although the predicted interaction effect is not significant for either measure. However, participants in our study were not asked to negotiate the issue with management, nor were they provided with any additional information regarding management's position on the issue. Therefore, we believe participants' proposed adjustments are the most useful and reliable auditor judgment measured in our experimental setting.

**FIGURE 4**  
**Graphical Representation of Results**

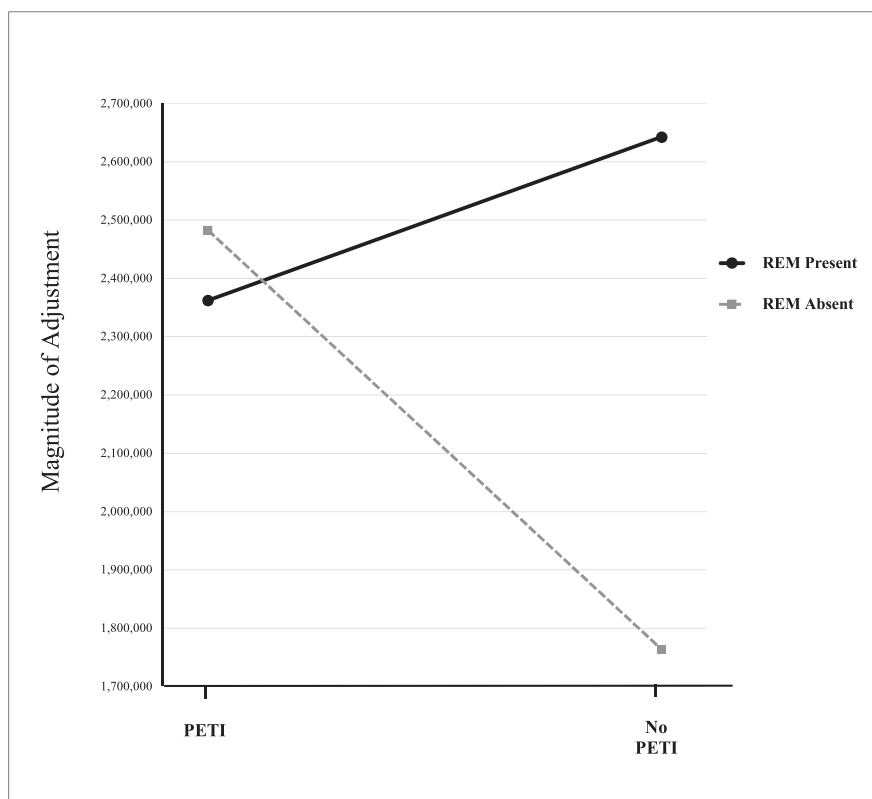


Figure 4 presents the participants' proposed adjustment for the quantitatively immaterial audit difference by experimental condition. These results are also reported in Table 1, Panel A. The experiment varies the presence of REM (Present, Absent) and PETI (Present, Absent)

### Mediation Analysis

In H2, we predict that REM indirectly influences auditors' adjustment decisions sequentially through auditors' perceptions of both the aggressiveness of management's operating decisions and the aggressiveness of management. That is, H2 predicts a causal sequence (i.e., serial mediation) in which REM influences perceived aggressiveness of management's advertising decisions (classification), which, in turn, influences the perceived aggressiveness of management in general (characterization), which then increases auditors' proposed adjustments. To test H2, we conducted a serial mediation analysis using the SPSS PROCESS macro (Model 6), following procedures described by Hayes (2013). The serial mediation model tests whether there is a significant indirect effect resulting from the causal relationship between two sequential mediators. Figure 5 illustrates the paths for the proposed serial mediation model, including the related path coefficients with indicators of significance. In Table 2, Panel A and Panel B, we provide descriptive statistics for our mediating variables. Additionally, we report the model's path coefficients and the indirect effects in Table 2, Panel C and Panel D, respectively.

When we test for serial mediation, the indirect effect of REM on auditors' proposed adjustments through both mediators (M1 and M2) was significant (i.e., the confidence interval does not include zero), supporting H2 (Table 2, Panel D; 95 percent CI = LL: 47.37; UL: 413.30). When controlling for the serial mediation effect, the individual indirect effects through the perceived aggressiveness of advertising decisions only (M1) or through the perceived aggressiveness of management only (M2) were not significant.<sup>16</sup> Therefore, when REM is present, auditors perceive management's advertising decision as more

<sup>16</sup> In a simple mediation model with perceived aggressiveness of management as the sole mediator, untabulated results indicate that there is a significant indirect effect at a 95 percent confidence level (95 percent CI = LL: 124.19; UL: 598.82). Similarly, using perceived aggressiveness of management's operating decisions as a sole mediator yields a significant indirect effect (95 percent CI = LL: 36.58; UL: 630.95). However, as reported in Table 2, once we control for both of those specific indirect effects, we find that REM primarily affects proposed audit adjustments indirectly through the causal relationship between the two mediators, consistent with the cascading of dispositional inferences. Overall, the serial mediation model provides the best test of the underlying theory.

**FIGURE 5**  
**Serial Mediation Model**

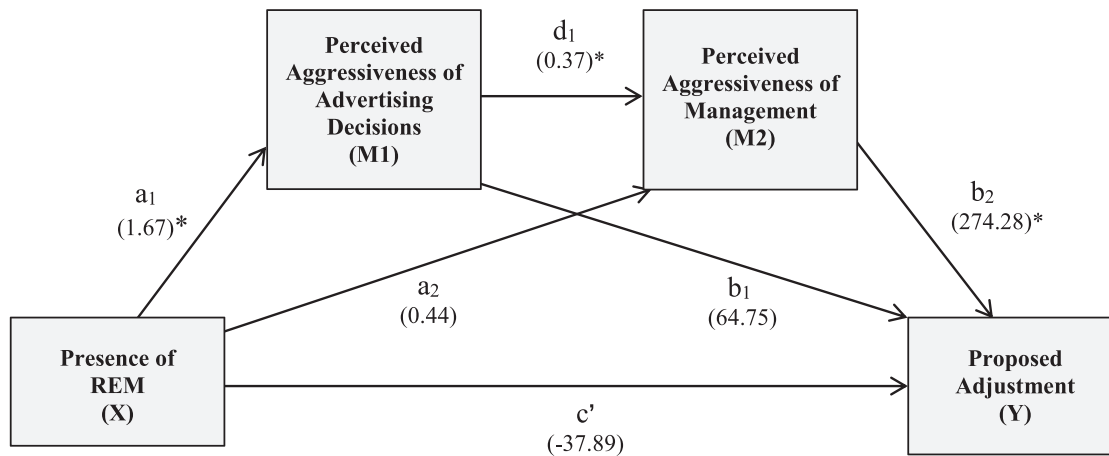


Figure 5 is an illustration of the serial mediation model with perceived aggressiveness of advertising decisions (M1) and perceived aggressiveness of management (M2) as causally linked serial mediators for the relationship between REM (X) and auditors' proposed audit adjustments (Y). Analysis was conducted using the SPSS PROCESS macro (Model 6) following procedures described by Hayes (2013). Path coefficients are reported below each path label in the figure. An asterisk on the path coefficient indicates that the path is significant based on a 95 percent confidence interval. Path coefficients, indirect effects, and confidence intervals are also reported in Table 2.

aggressive ( $a_1$  is positive and significant), which then causes them to perceive management as more aggressive ( $d_1$  is positive and significant). Because of this dispositional inference, auditors propose larger income-decreasing adjustments relating to management's estimate for the allowance for doubtful accounts ( $b_2$  is positive and significant).<sup>17</sup> These findings are consistent with the notion of a cascading effect of dispositional inferences, whereby the dispositional inferences resulting from REM affect how auditors respond to subsequent, unrelated management decisions. Specifically, REM causes auditors to constrain management's estimates to a greater extent.

### Perceived Risk as an Alternative Explanation

The observed relationship between REM and auditors' proposed adjustments potentially is explained by auditor perceptions of risk, as opposed to their perceptions of management's disposition. That is, rather than perceiving management as more aggressive, REM may cause auditors to believe that audit risk has increased and that there is a greater likelihood of undetected misstatements, such that auditors are more likely to adjust audit differences.

To examine this issue, we ask participants to assess the risk that the company's other estimates are unreasonable, using a nine-point scale (1 = very low; 9 = very high). Untabulated ANOVA results indicate that REM causes participants to perceive higher risk ( $p$ -value < 0.01). However, both the main effect for PETI and the interaction are insignificant ( $p$ -value = 0.40 and 0.66, respectively). We also conducted mediation analyses following procedures described by Hayes (2013), using Model 4. As we report in Figure 6, the resulting bootstrapped confidence interval for the indirect effect of perceived risk on auditors' proposed adjustment includes zero (95 percent CI = LL: -15.43; UL: 461.20), indicating that even though REM causes participants to perceive higher levels of risk, those risk perceptions do not mediate the relationship between REM and auditors' proposed adjustments.

Importantly, based on our discussion of CIT, the relationship between REM and auditors' risk perceptions also should be sequentially mediated by the perceived aggressiveness of management's operating decisions and of management in general. Accordingly, we test the same serial mediation model presented in Figure 5 with one key change. Instead of using auditors' proposed adjustments as the outcome variable, we use auditors' risk perceptions. We report results for the alternative serial mediation model in Figure 7. Similar to our main results, we find a significant indirect effect of REM on auditors' risk perceptions through both mediators (i.e., the confidence interval does not include zero; 95 percent CI = LL: 0.04; UL: 0.49), which also suggests that the effect of REM is not limited to a specific issue, and can cause greater scrutiny of all estimates.

<sup>17</sup> Given that we do not consider other dispositional attributes as potential mediators, these results are limited by the possibility that there is an unmeasured variable that is correlated with participants' perceptions of aggressiveness.

**TABLE 2**  
Serial Mediation Analysis

**Panel A: Mean (Std. Dev.) Perceived Aggressiveness of Advertising Decisions (Mediator 1)**

	<u>PETI</u>	<u>No PETI</u>	<u>Overall</u>
REM	6.13 (1.34) n = 31	6.14 (1.76) n = 28	6.14 (1.54) n = 59
No REM	4.62 (1.57) n = 29	4.30 (1.38) n = 27	5.61 (1.47) n = 56
Overall	5.40 (1.63) n = 60	5.24 (1.83) n = 55	5.32 (1.72) n = 115

**Panel B: Mean (Std. Dev.) Perceived Aggressiveness of Management (Mediator 2)**

	<u>PETI</u>	<u>No PETI</u>	<u>Overall</u>
REM	6.77 (1.15) n = 31	6.54 (1.14) n = 28	6.66 (1.14) n = 59
No REM	5.90 (1.01) n = 29	5.30 (1.56) n = 27	5.61 (1.33) n = 56
Overall	6.35 (1.16) n = 60	5.93 (1.49) n = 55	6.15 (1.34) n = 115

**Panel C: Path Estimates and Coefficients for Serial Mediation Model**

<u>Path Estimate</u>	<u>Path Coefficient</u>	<u>LLCI<sup>a</sup></u>	<u>ULCI<sup>a</sup></u>
a <sub>1</sub>	1.67*	1.11	2.23
a <sub>2</sub>	0.44	-0.03	0.91
d <sub>1</sub>	0.37*	0.23	0.51
b <sub>1</sub>	64.75	-93.78	223.29
b <sub>2</sub>	274.28*	80.87	467.68
c'	-37.89	-529.88	454.10

**Panel D: Indirect Effects and Confidence Intervals**

<u>Indirect Effect</u>	<u>Effect</u>	<u>LLCI<sup>a</sup></u>	<u>ULCI<sup>a</sup></u>
Total Indirect Effect	397.28	124.67	716.18
Aggressiveness of Decision (M1)	108.22	-115.59	428.71
Aggressiveness of Management (M2)	119.64	-9.54	356.67
M1 and M2 Sequential Relationship	169.42	47.37	413.30

\* Denotes one-tailed p-value of 0.05 or less.

<sup>a</sup> Following procedures described by Hayes (2013), the significance of the indirect effects is evaluated with 95 percent confidence intervals, obtained through bootstrapping techniques. See Figure 5 for additional details.

**Fairness of REM as an Alternative Explanation**

Auditors in our experiment also could be constraining the allowance estimate because they believe that management's use of REM unfairly distorts the company's operating results. Extensive research in psychology, management, and economics relating to fairness suggests that, in a variety of contexts, individuals prefer equitable and fair outcomes (Adams 1965; Kahneman, Knetsch, and Thaler 1986; Fehr and Schmidt 1999; Folger and Cropanzano 2001; Miller 2001; Schweitzer and Gibson 2008). For example, prior accounting research shows that fairness impacts audit committee members' decisions;

**FIGURE 6**  
**Alternative Simple Mediation Model Risk on Other Estimates as Mediator**

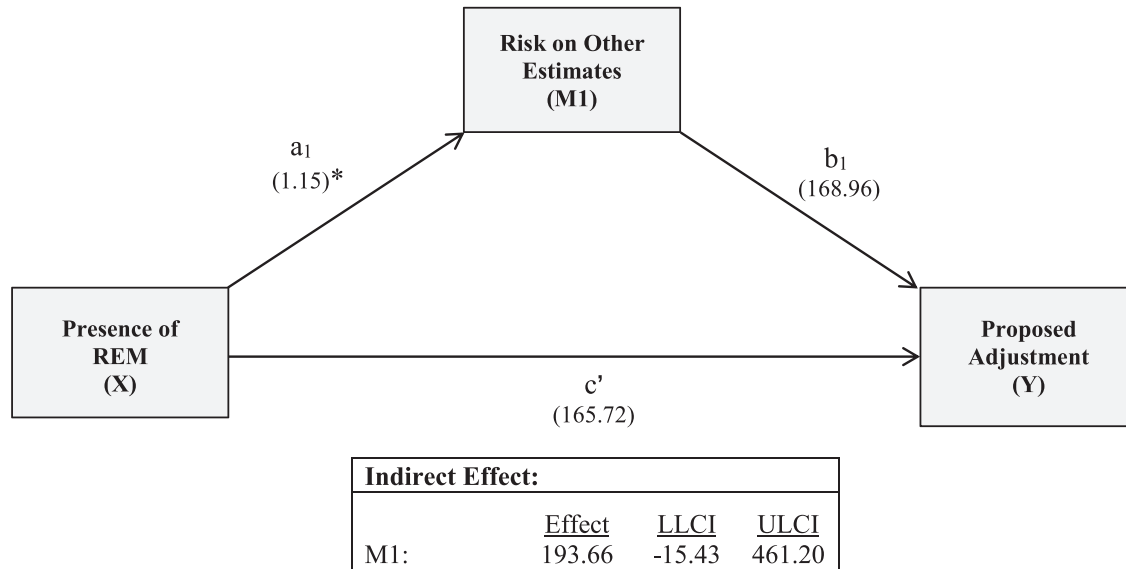


Figure 6 illustrates a simple mediation model (SPSS PROCESS macro Model 4) using auditors' perceptions of risk that management's other estimates are unreasonable as the mediator for the relationship between REM (X) and the magnitude of auditors' proposed adjustments (Y). We report path coefficients below each path label in the figure; an asterisk on the path coefficient indicates that the path is significant based on a 95 percent confidence interval.

specifically, they are more likely to support auditors' proposed adjustments when they perceive that failure to record the proposed adjustment is less fair to shareholders (Bierstaker, Cohen, DeZoort, and Hermanson 2012).

Recent interview-based evidence suggests that many auditors believe that REM can be value-destroying and that it is misleading to financial statement users (Commerford et al. 2016). Therefore, an alternative explanation for this study's results is that the presence of REM could be influencing auditors' perceptions of fairness to shareholders, which, in turn, could cause auditors to constrain management's estimates to punish management and restore fairness.

Related research concerning fairness suggests that when individuals observe outcomes that they perceive to be unfair, they are more likely to take actions to restore fairness (Piron and Fernandez 1995; Cropanzano, Goldman, and Folger 2003; Skarlicki and Kulik 2004). However, auditors cannot directly respond to REM. For example, if management decreases operating expenses (e.g., advertising) in order to meet an earnings target, then auditors cannot require management to adjust the expense account or increase its operating expenditures. Consequently, auditors may seek to restore fairness through other means. Specifically, auditors may be more likely to constrain management's estimates to offset the earnings benefit derived from REM. By doing so, auditors would believe that they have restored fairness by ensuring that financial statement users are not making decisions based on misleading financial results.

To examine this issue, we capture the extent to which auditors perceive that the unadjusted financial statements are "fair" to users. Following Bierstaker et al. (2012), we used a nine-point scale (1 = very unfair; 9 = very fair) and asked participants, "To what extent are 2013 unadjusted earnings (i.e., net earnings of \$180 million; EPS of \$1.20 per share) fair to the interests of current ATS shareholders?"

Untabulated ANOVA results indicate that participants perceive the fairness of unaudited financial information as significantly lower in the presence of REM ( $p$ -value < 0.01). Both the main effect for PETI and the interaction are insignificant ( $p$ -value = 0.62 and 0.96, respectively). Additionally, we conducted mediation analyses following procedures described by Hayes 2013, using Model 4. As shown in Figure 8, the resulting bootstrapped confidence interval for the indirect effect of perceived fairness on auditors' proposed adjustment includes zero (95 percent CI = LL: -51.93; UL: 343.06), indicating that even though auditors perceive the financial statements to be less fair when REM is present, those perceptions do not mediate the relationship between REM and auditors' proposed adjustments.<sup>18</sup>

<sup>18</sup> We also captured perceptions of fairness with an adapted version of the Moral Equity Scale (MES) (Cohen, Holder-Webb, Sharp, and Pant 2007), and this alternative measure of fairness yields similar results.

**FIGURE 7**  
**Alternative Serial Mediation Model Risk on Other Estimates as Outcome Variable**

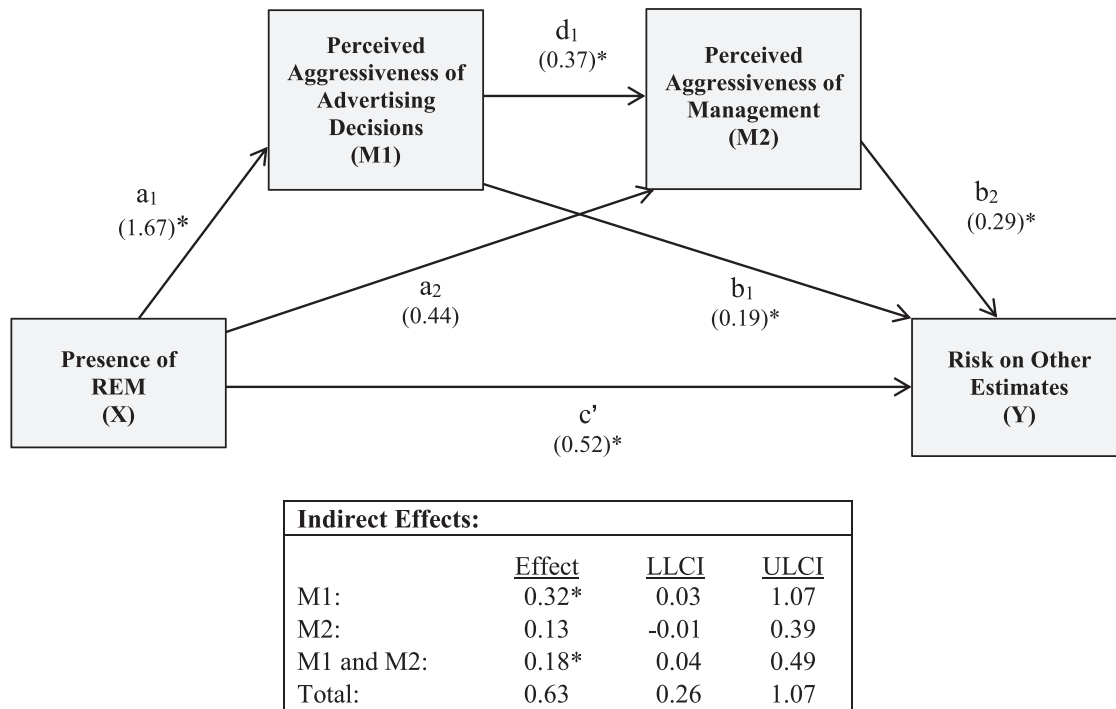


Figure 7 illustrates the serial mediation model with perceived aggressiveness of advertising decisions (M1) and perceived aggressiveness of management (M2) as causally linked serial mediators for the relationship between REM (X) and auditors' perceptions that management's other estimates are unreasonable (Y). We conducted the analysis using the SPSS PROCESS macro (Model 6) following procedures described by Hayes 2013. We report path coefficients below each path label in the figure; an asterisk on the path coefficient indicates that the path is significant based on a 95 percent confidence interval

To summarize, while REM influences perceived fairness, the mediation results do *not* support the alternative explanation that in the presence of REM, auditors constrain management's estimates to punish management and restore fairness. Rather, consistent with our proposed model in Figure 1 and our mediation results reported in Figure 5, our additional analyses demonstrate that REM causes a cascading of dispositional inferences that can influence numerous auditor judgments.

**V. DISCUSSION**

We report the results of an experiment that informs our understanding of two forms of earnings management (i.e., REM and AEM) in several ways. First, management's use of REM may have unintended consequences, as auditors appear to pursue more conservative balances in other financial statement areas (e.g., estimates). Specifically, REM causes auditors to view management as having an aggressive disposition and, consequently, auditors propose larger adjustments to management's estimates even when the adjustment is not considered material. We also provide evidence that the cascading effect of dispositional inferences likely pertains to a variety of management judgments.

Prior accounting research largely has relied on archival methods to examine the relationship between earnings management and auditor decisions. A key limitation of archival methods is that the presence of REM must be inferred based on observed statistical anomalies in a client's operating results. In addition, existing proxies for REM do not allow researchers to differentiate strategic business decisions from management's use of REM (i.e., deliberate attempts to report more favorable earnings). Our experimental approach ensures that management's actions are REM and that participants observe REM, which allows us to demonstrate a direct relationship between the use of REM and auditor judgments and decisions.

Our results relate to the archival finding that the level of AEM is decreasing, while the relative level of REM is increasing (Cohen et al. 2008) in an interesting way. Prior research typically asserts that this effect is attributable to increased auditor scrutiny of management's estimates and accruals, which causes managers to rely more on REM to achieve earnings targets (e.g., Ewert and Wagenhofer 2005; Cohen et al. 2008; Chi et al. 2011; Evans et al. 2015). However, in our study, when

**FIGURE 8**  
**Alternative Simple Mediation Model Perceived Fairness as Mediator**

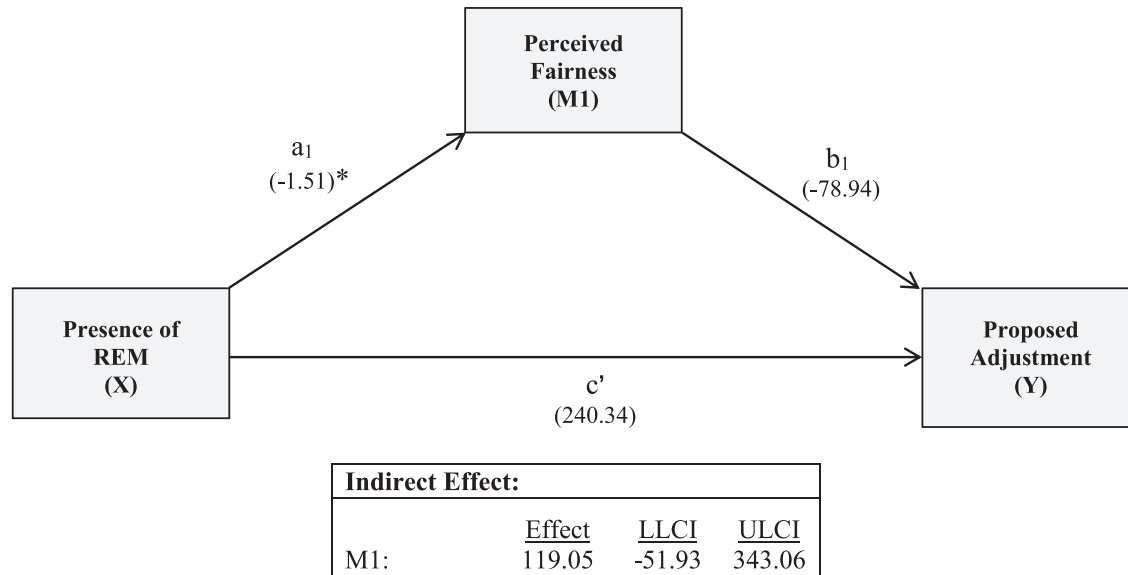


Figure 8 illustrates a simple mediation model (SPSS PROCESS macro Model 4) using auditors' perceptions of fairness (i.e., the extent to which they believe that the unadjusted financial statements are fair to interests of current shareholders) as the mediator for the relationship between REM (X) and the magnitude of auditors' proposed adjustments (Y). We report path coefficients below each path label in the figure; an asterisk on the path coefficient indicates that the path is significant based on a 95 percent confidence interval.

management uses REM, auditors propose larger audit adjustments, which could constrain management's accruals to a greater extent, suggesting that auditors' reactions to REM contribute, at least in part, to the inverse relationship between AEM and REM observed in archival data.

Our reported finding contributes to both the accounting and psychology literature by providing evidence that dispositional inferences will cascade, affecting how individuals interpret subsequently observed actions. While existing accounting research uses CIT to demonstrate that the nature of management's actions affects auditor perceptions of management, as well as how auditors respond to those specific actions (Wong-On-Wing et al. 1989; Reckers and Wong-On-Wing 1991; Commerford et al. 2017), our study is the first to demonstrate that dispositional inferences about management can cascade and impact unrelated audit decisions. During the course of an audit, auditors continually observe management's decisions. Therefore, it is likely that the cascading effect of dispositional inferences is pervasive in the audit context, and this effect may offer an additional explanation as to why REM is positively associated with audit fees (Greiner et al. 2017) and auditor resignations (Kim and Park 2014).

More broadly, our study provides evidence that auditor reactions to REM may impact externally reported financial information. Prior research suggests that with regard to qualitative materiality, auditors are reluctant to require adjustments relating to quantitatively immaterial audit differences if doing so would cause clients to miss earnings targets (e.g., Libby and Kinney 2000; Ng and Tan 2003, 2007; Ng 2007). In contrast, we show that auditors are more likely to propose adjustments to quantitatively immaterial audit differences when they impact the client's ability to meet earnings targets, suggesting that subsequent to SAB No. 99 and AS 2810, auditors are more likely to consider qualitative factors when making adjustment decisions.

Our study also contributes to prior audit literature focusing on management attitudes and auditor risk assessments. Prior research finds that certain client management attitudes may lead to higher perceived risks (typically, fraud risk) and, in some cases, greater audit effort aimed to reduce such risks (Albrecht and Romney 1986; Loebbecke et al. 1989; Beaulieu 2001). For example, Bedard and Johnstone (2004) find that auditors plan more extensive audit testing when earnings manipulation risk is higher. Further, research suggests that auditors consider global factors when making micro-level assessments (e.g., Allen, Hermanson, Kozloski, and Ramsay 2006; Johnson et al. 2013; O'Donnell and Schultz 2005). However, our results extend beyond auditors' perceptions of risk, as we find that REM can alter auditors' perception of management, which then causes auditors to propose larger adjustments to management's estimates. That is, we show that auditors' perceptions of management aggressiveness can be derived from within-GAAP operating decisions (i.e., REM). Further, these perceptions about



management's disposition affect specific auditor decisions (i.e., proposed adjustments), which have the potential to alter financial statement content.

Our study is not without limitations. We ask auditors to propose an audit adjustment to an estimate. However, in practice, auditors likely discuss the issue with management to come to a mutual agreement. That said, it is important to note that negotiation research in accounting suggests that once auditors establish a position, they move very little from it (Hatfield et al. 2010). Even so, it is possible that the perception-based judgments in our study provide auditors with a less persuasive rationale for such negotiations with management. Future research should consider the extent to which these proposed adjustments persist through the negotiation process and the extent to which auditors' inferences about management influence their approach to such negotiations.

Additionally, although the majority of our results were consistent with our expectations, our findings unexpectedly indicate that REM does not increase the magnitude of auditors' proposed adjustments when PETI is already present, a finding possibly attributable to a ceiling effect in our experimental setting. That is, it is possible that once an issue is determined to be qualitatively material, there is little room for REM to have an impact. For example, in our setting, despite the guidance regarding qualitative materiality, there might always be a certain number of auditors who are unlikely to adjust management estimates when doing so could cause the client to miss an earnings target. At the same time, the finding is interesting in its own right, as it demonstrates that REM and qualitative materiality factors appear to have a similar influence on auditors' proposed adjustments.

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